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UNIVERSITY OF WYOMING COOPERATIVE RESEARCH REPORT

TO THE BUREAU OF LAND MANAGEMENT

ANNUAL PROGRESS REPORT

1982 RESULTS

VOLUME I

PHENOLOGY STUDY UNIT

PHENOLOGY AND PRODUCTION STUDIES ON

SEMI-ARID SHRUB TYPES

SUBMITTED BY WYOMING AGRICULTURAL EXPERIMENT STATION
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PHENOLOGY AND PRODUCTION STUDIES ON SEMI-ARID SHRUB TYPES[1]

1982 ANNUAL PROGRESS REPORT

VOLUME I: PHENOLOGY STUDY

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June 1983

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[1] Published with the approval of the Director, Wyoming Agricultural Experiment Station as Scientific Report No. 1230.

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SECTION I

Phenology Study

1982

Introduction

Little detailed phenology and productivity information is available for arid land species of the western United States. Phenological studies in terms of production and microenvironmental variations will provide information that can be used to increase the efficiency of Bureau decision making with respect to management alternatives. Phenology studies of dominant shrub and grass species will provide information relative to specific changes in environmental characteristics such as precipitation, and soil and ambient temperatures. Both basic scientific knowledge and more precise information relative to the Bureau's multiple resource management objectives will be available from this phenology study.

Artemisia tridentata, *Artemisia nova*, *Agropyron smithii*, and *Agropyron spicatum* are the major shrub and grass species in the intermountain region on semi-arid, low elevation grazing ranges of public land. These species are especially important in the semi-arid regions of the western half of Wyoming from the Montana border on the north and the Utah and Colorado borders on the south. Their importance in adjacent states is equally significant. The ecological divergence of these four species is great. They are found from high elevations to very low elevations and from mesic to xeric situations. Therefore, these four species, in the development of the cooperative research program between the Bureau of Land Management and the University of Wyoming, were selected for intensive studies, to determine interrelationships of phenology, production, and environmental characteristics. These kinds of data are of major importance to the Bureau for development of efficient and sound resource management decisions.

Intensive phenological studies were established in 1973 on 12 selected exclosure areas: Bud Kimball, Cedar Mountain, Cumberland #3, Demer, Farson, Horse Creek, Mesa Antelope, Owl Draw, Red Wash #2, Shoshoni #7, Sweetwater, Upper Government Draw. Phenophase descriptions and stages with numerical scales were established for four specific plant species: *Agropyron smithii*, *A. spicatum*, *Artemisia nova*, *A. tridentata*, and for one phenological inventory of all plant species. Seasonal development (March-November) has been recorded for more than 140 plant species. Individual plants of the four principal species in each of the research sites were permanently located for repeated observation.

Objectives

The objectives of the study are to determine:

(1) the relationship of phenodynamics with vegetation production and environmental data;

(2) relationships of phenodynamics and environmental characteristics to grazing and management procedures.

Methods and Procedures

The expanded numerical vegetative and reproductive phenological scales established in 1979 were used during the 1982 field season. The two scales were designated to allow simultaneous scoring of vegetative and reproductive development. The continuous numerical sets, from 1 thru 8 and 8 thru 18 for the vegetative and reproductive stages respectively, facilitates the application of quantitative analysis.

Twenty individual plants of each of the four principal species were permanently located along a 100 foot line in each exclosures. Every 5 ft. on the line, distance along and from the line for the closest plant, were recorded and utilized to identify individual plants at each sampling date.

Phenological measurements of Artemisia nova and A. tridentata included plant size, age, vegetative stages of growth with twig length, and reproductive stages of flowering and seed ripening with seed stalk length. Phenological measurements of Agropyron smithii and A. spicatum included plant size, age, vegetative stages of growth with leaf width and height; reproductive stages with spike height, number of spikelets per seed head and seed head development.

The plant age classes of shrubs are classified as:

1. = seedling;
2. = young and small;
3. = intermediate age and size;
4. = mature age and size;
5. = old and decadent.

The maturity of Agropyron spicatum clumps are classified as: (a) seedling, (b) young, (c) intermediate, (d) mature, and (e) old. Each maturity classification can then be designated as: (a) sparse, (b) intermediate, (c) dense and (d) decadent.

The vegetative phenological stages and numerical scores for the shrubs and forbs are listed below.

1. = winter dormancy.
2. = initial growth.
3. = early vegetative growth -- new leaves developing.
4. = immature vegetative growth -- twigs elongating.
5. = mature vegetative growth -- twigs elongated.
6. = vegetative parts browning.
7. = fall regreening and/or leaf shed.
8. = winter dormancy.

The reproductive phenological stages and numerical scores for the shrubs and forbs are:

8. = winter dormancy.

9. = floral bud stage -- first bud developing to initiation of bloom.

10. = early bloom -- initiation of bloom to 10% bloom.

11. = mid-bloom -- 10% to 75% bloom.

12. = late bloom -- flowers drying and seeds beginning to form,

13. = milk stage -- seed soft and immature.

14. = dough stage -- seed well formed but soft.

15. = ripe seed -- seeds mature and hard.

16. = reproductive parts browning -- seeds cast.

17. = fall regreening.

18. = winter dormancy.

The vegetative phenological stages and numerical scores for grasses are:

1. = winter dormancy.

2. = first leaf stage -- from the appearance of the first leaf to the appearance of the second leaf.

3. = second leaf state -- from the appearance of the second leaf to the appearance of the third leaf.

4. = third leaf stage -- from the appearance of the third leaf to the appearance of the fourth leaf.

5. = fourth leaf stage -- from the appearance of the fourth leaf to full leaf development.

6. = vegetative parts browning.

7. = fall regreening.

8. = winter dormancy.

The reproductive phenological stages and numerical scores for grasses are:

8. = winter dormancy.

9. = Boot stage -- the seed stalk is elongating and there is noticeable swelling of the seed head in boot.

10. = seedhead emergence -- from the beginning of emergence of the seedhead to the start of anthesis.

11. = early anthesis -- from initiation of anthesis to 50% of florets in bloom.

12. = full anthesis -- from 50% to 100% of florets in bloom.

13. = milk stage -- seed soft and immature.

14. = dough stage -- seed well formed but soft.

15. = ripe seed -- seeds hard and mature.

16. = reproductive parts browning -- seeds cast.

17. = fall regreening.

18. = winter dormancy.

Additional clarification is being developed with descriptive statements which define phenological appearance of the plants or several stages within a single whole number phenology value.

1982 Results

A listing of the phenology study exclosures, exclosure location by county and the principal phenology species scored in each exclosure is given in Table I. Table II is an alphabetical listing of all species found in the twelve study exclosures. Table III is a phenological inventory presented by exclosure and sampling date. The prime species intensive phenological survey of each permanently identified plant for each exclosure including phenological stage, plant dimensions, plant age class and percent dead material are given in Table IV. A summary of the Table IV data, averaged over the 20 sampled plants of each prime species by exclosure and sampling date are presented in Table V. 1973 through 1982 data on phenological development at each exclosure for three major growth stages are given in Table VI for the species listed in Table II.

1982 phenology curves for the principal species in each exclosure were compared to curves developed from the earliest and latest dates observed from 1973 to 1982 (Figure I).

TABLE I. Alphabetical listing of study areas, the county where each occurs, and the prime species.

Exclosure Name	County	Prime Species
Bud Kimball	Washakie	Agropyron spicatum Agropyron smithii Artemisia tridentata
Cedar Mountain	Sweetwater	Agropyron spicatum Artemisia tridentata
Cumberland #3	Lincoln	Agropyron smithii Agropyron spicatum Artemisia tridentata
Demer	Washakie	Agropyron smithii Agropyron spicatum Artemisia tridentata
Farson	Sweetwater	Agropyron smithii Artemisia tridentata
Horse Creek	Big Horn	Agropyron smithii Agropyron spicatum Artemisia nova Artemisia tridentata
Mesa Antelope	Sublette	Agropyron smithii Artemisia tridentata
Owl Draw	Natrona	Agropyron smithii Agropyron spicatum Artemisia nova Artemisia tridentata
Red Wash #2	Sweetwater	Agropyron smithii Agropyron spicatum Artemisia tridentata
Shoshone Ant #7	Fremont	Agropyron smithii Artemisia tridentata
Sweetwater	Fremont	Agropyron smithii Artemisia nova Artemisia tridentata
Upper Gov't. Draw	Fremont	Agropyron smithii Artemisia tridentata

TABLE II. LIST OF PLANT NAMES WHICH OCCURRED IN PHENOLOGY STUDY AREAS.

Code	Genus-Species	Common Name	Life Form	Longevity
ACLA	Achillea lanulosa	Western yarrow	Forb	Perennial
AGGL	Agroseris glauca	Pale agoseris	Forb	Perennial
AGCR	Agropyron cristatum	Crested wheatgrass	Grass	Perennial
AGSM	Agropyron smithii	Western wheatgrass	Grass	Perennial
AGSP	Agropyron spicatum	Bluebunch wheatgrass	Grass	Perennial
ALCE	Allium cernuum	Nodding onion	Forb	Perennial
ALTE	Allium textile	Prairie onion	Forb	Perennial
AMAL	Amelanchier alnifolia	Saskatoon serviceberry	Shrub	Perennial
ANSE	Androsace septentrionalis	Rock jasmine	Forb	Annual
ANDI	Antennaria dimorpha	Low pussytoe	Mat-form	Perennial
ANRO	Antennaria rosea	Rose pussytoes	Mat-form	Perennial
ANT	Antennaria spp.	Pussytoe	Forb	Perennial
ARHO^2	Arabis holboellii	Holboell rockcress	Forb	Perennial
ARLI	Arabis lignifera	Woody rockcress	Forb	Perennial
ARCO	Arenaria congesta	Ballhead sandwort	Forb	Perennial
ARHO	Arenaria hookeri	Hooker sandwort	Mat-form	Perennial
ARFE	Aristida fenderiana	Fendler three-awn	Grass	Perennial
ARFU	Arnica fulgens	Orange arnica	Forb	Perennial
ARFR	Artemisia frigida	Fringed sagewort	Half-shrub	Perennial
ARNO	Artemisia nova	Black sagebrush	Shrub	Perennial
ARSP	Artemisia spinescens	Bud sagewort	Half-shrub	Perennial
ARTR	Artemisia tridentata	Big sagebrush	Shrub	Perennial
ASCA	Aster canescens	Hoary aster	Forb	Perennial
ASCI	Astragalus cibarius	Silky milkvetch	Forb	Perennial
ASDI	Astragalus diversifolius	Meadow milkvetch	Forb	Perennial
ASDR	Astragalus drummondii	Drummond milkvetch	Forb	Perennial
ASGR	Astragalus grayi	Gray's milkvetch	Forb	Perennial
ASKE	Astragalus kentrophyta	Nuttall kentrophyta m.	Forb	Perennial
ASMI^2	Astragalus miser	Timber milkvetch	Forb	Perennial
ASMI	Astragalus missouriensis	Missouri milkvetch	Forb	Perennial
ASPU	Astragalus purshii	Pursh milkvetch	Forb	Perennial
ASSP	Astragalus spatulatus	Tufted milkvetch	Mat-form	Perennial
AST	Astragalus spp.	Milkvetch	Forb	Perennial
ATCO	Atriplex confertifolia	Shadscale saltbush	Shrub	Perennial
ATGA	Atriplex gardneri	Gardner saltbush	Half-shrub	Perennial
BAIN	Balsamorhiza incana	Hoary balsamroot	Forb	Perennial
BASA	Balsamorhiza sagittata	Arrowleaf balsamroot	Forb	Perennial
BEWY	Besseya wyomingensis	Wyoming kittentails	Forb	Perennial
BOGR	Bouteloua gracilis	Blue grama	Grass	Perennial
BRJA	Bromus japonicus	Japanese chess	Grass	Annual
BRTE	Bromus tectorum	Cheatgrass	Grass	Annual
CANU	Calochortus nuttallii	Sego mariposalily	Forb	Perennial
CAMI	Camelina microcarpa	Littlepod falseflax	Forb	Annual
CAEL	Carex eleocharis	Needleleaf sedge	Sedge	Perennial
CAFI	Carex filifolia	Threadleaf sedge	Sedge	Perennial
CAAN	Castilleja angustifolia	Narrowleaf Indianpaint b.	Forb	Perennial
CACH	Castilleja chromosa	Desert Indianpaintbrush	Forb	Perennial
CALI	Castilleja linariaefolia	Wyoming Indian paintbrush	Forb	Perennial

TABLE II. (Continued)

Code	Genus-Species	Common Name	Life Form	Longevity
CAS	Castilleja spp.	Indianpaintbrush	Forb	Perennial
CELA	Ceratoides lanata	Winterfat	Half-shrub	Perennial
CHDO	Chaenactis douglasii	Douglas dustymaiden	Forb	Perennial
CHE	Chenopodium spp.	Goosefoot	Forb	Annual
CHAL	Chenopodium album	Lambsquarter	Forb	Annual
CHDE	Chenopodium dessicatum	Desert goosefoot	Forb	Annual
CHFR	Chenopodium fremontii	Fremont goosefoot	Forb	Annual
CHLE	Chenopodium leptophyllum	Narrowleaf goosefoot	Forb	Annual
CHTE	Chorispora tenella	Common bluemustard	Forb	Annual
CHNA	Chrysothamnus nauseosus	Rubber rabbitbrush	Shrub	Perennial
CHVI	Chrysothamnus viscidiflorus	Douglas rabbitbrush	Shrub	Perennial
CIR	Cirsium spp.	Thistle	Forb	Perennial
CIUN	Cirsium undulatum	Wavyleaf thistle	Forb	Perennial
CLLU	Cleome lutea	Yellow beeplant	Forb	Annual
CLSE	Cleome serrulata	Rockymountain beeplant	Forb	Annual
COPA	Comandra pallida	Pale bastardtoadflax	Forb	Perennial
COLI	Collomia linearis	Slenderleaf collomia	Forb	Annual
COPA[2]	Collinsia parviflora	Smallflowered blueeyedmary	Forb	Annual
CORA	Cordylanthus ramosus	Branched birdbeak	Forb	Annual
CRAC	Crepis acuminata	Tapertip hawksbeard	Forb	Perennial
CRMO	Crepis modocensis	Yellowstone hawksbeard	Forb	Perennial
CROC	Crepis occidentalis	Western hawksbeard	Forb	Perennial
CRBR	Cryptantha bradburiana	Miners candle	Forb	Perennial
CRFE	Cryptantha fendleri	Fendler cryptantha	Forb	Annual
CRFL	Cryptantha flavoculata	Roughseed cryptantha	Forb	Perennial
CRY	Cryptantha spp.	Cryptantha	Forb	Perennial
CYMO	Cymopterus montanus	Mountain springparsley	Forb	Perennial
DEGE	Delphinium geyeri	Plains larkspur	Forb	Perennial
DEPI	Descurainia pinnata	Pinnate tansymustard	Forb	Annual
DOCO	Dodecatheon conjugens	Sailorcaps shootingstars	Forb	Perennial
ERCA[2]	Erigeron canadensis	Horseweed fleabane	Forb	Annual
EROC	Erigeron ochroleucus	Creamy fleabane	Forb	Perennial
ERPU	Erigeron pumilus	Low fleabane	Forb	Perennial
ERI	Erigeron spp.	Fleabane	Forb	Perennial
ERBR	Eriogonum brevicaule	Shortstem wildbuckwheat	Forb	Perennial
ERCA	Eriogonum caespitosum	Mat wildbuckwheat	Mat-form	Perennial
ERCE	Eriogonum cernuum	Nodding wildbuckwheat	Forb	Annual
ERMI	Eriogonum microthecum	Slenderbrush wildbuckwheat	Shrub	Perennial
EROV	Eriogonum ovalifolium	Cushion wildbuckwheat	Mat-form	Perennial
ERSU	Eriogonum subalpinum	Subalpine wildbuckwheat	Mat-form	Perennial
ERAS	Erysimum asperum	Plains wallflower	Forb	Perennial
EUSE	Euphorbia serphyllifolia	Thymeleaf spurge	Forb	Annual
FRAT	Fritillaria atropurpurea	Purplespot fritillary	Forb	Perennial
GACO	Gaura coccinea	Scarlet gaura	Forb	Perennial
GIAG	Gilia aggregata	Skyrocket gilia	Forb	Perennial
GICO	Gilia congesta	Ballhead gilia	Forb	Perennial
GIPU	Gilia pumila	Dwarf gilia	Forb	Annual
GRSP	Grayia spinosa	Spiny hopsage	Shrub	Perennial

TABLE II. (Continued)

Code	Genus-Species	Common Name	Life-form	Longevity
GRSQ	Grindelia squarrosa	Curlycup gumweed	Forb	Biennial
HAGL	Halogeton glomeratus	Halogeton	Forb	Annual
HAAC	Haploppapus acaulis	Stemless goldenweed	Mat-form	Perennial
JUOS	Juniperus osteosperma	Utah juniper	Shrub-tree	Perennial
JUSC	Juniperus scopulorum	Rockymountain juniper	Shrub-tree	Perennial
KOAM	Kochia americana	Greenmolly summercypress	Half-shrub	Perennial
KOCR	Koeleria cristata	Prairie junegrass	Grass	Perennial
LAIN	Lactuca integrata	Lettuce	Forb	Perennial
LASE	Lactuca serriola	Prickly lettuce	Forb	Perennial
LARE	Lappula redowskii	Bluebur stickseed	Forb	Annual
LEDE	Lepidium densiflorum	Prairie pepperweed	Forb	Annual
LEPE	Lepidium perfoliatum	Clasping pepperweed	Forb	Annual
LEPU	Leptodactylon pungens	Granite gilia	Half-shrub	Perennial
LERE	Lewisia rediviva	Bitterroot	Forb	Perennial
LEAL	Lesquerella alpina	Alkaline bladderpod	Forb	Perennial
LELU	Lesquerella ludoviciana	Foothill bladderpod	Forb	Perennial
LES	Lesquerella spp.	Bladderpod	Forb	Annual
LILE	Linum lewisii	Lewis flax	Forb	Perennial
LIIN	Lithospermum incisum	Narrowleaf gromwell	Forb	Perennial
LIRU	Lithosperum ruderale	Wayside gromwell	Forb	Annual
LOFO	Lomatium foeniculum	Hairyseed lomatium	Forb	Perennial
LOOR	Lomatium orientale	Eastern lomatium	Forb	Perennial
LOSI	Lomatium simplex	Narrowleaf lomatium	Forb	Perennial
LUPU	Lupinus pusillus	Rusty lupine	Forb	Annual
MACA	Machaeranthera canescens	Hoary aster	Forb	Perennial
MAGR	Machaeranthera grindeloides	Pinnate woody-aster	Half-shrub	Perennial
MATA	Machaeranthera tanacetifolia	Tansyleaf aster	Forb	Annual
MAVI	Mamillaria vivipara	Pink pincushion cactus	Forb	Perennial
MELO	Mertensia longiflora	Small bluebells	Forb	Perennial
MIGR	Microsteris gracilis	Pink microsteris	Forb	Annual
MONU	Monolepis nuttalliana	Nuttall monolepis	Forb	Annual
MUDI	Musineon divaricatum	Leafy musineon	Forb	Perennial
OEAL	Oenothera albicaulis	Pale eveningprimrose	Forb	Perennial
OECA	Oenothera caespitosa	Tufted eveningprimrose	Forb	Perennial
OECO	Oenothera contorta	Plains eveningprimrose	Forb	Annual
OPPO	Opuntia polyacantha	Plains pricklypear	Succulent	Perennial
ORFA	Orobanche fasciculata	Tufted broomrape	Sapprophyte	Perennial
ORHY	Oryzopis hymenoides	Indian ricegrass	Grass	Perennial
OXLA	Oxytropis lambertii	Lambert crazyweed	Forb	Perennial
PECL	Penstemon cleburnei	Cleyburn penstemon	Forb	Perennial
PEFR	Penstemon fremonti	Fremont penstemon	Forb	Perennial
PELA	Penstemon laricifolius	Larchleaf penstemon	Forb	Perennial
PEN	Penstemon spp.	Penstemon	Forb	Perennial
PHHO	Phlox hoodii	Hood's phlox	Mat-form	Perennial
PHLO	Phlox longiflora	Long-leaf phlox	Half-shrub	Perennial
PHMU	Phlox multiflora	Flowery phlox	Forb	Perennial
PLPA	Plantago patagonica	Wooly Indianwheat	Forb	Annual
PLSP	Plantago spinescens	Spiny Indianwheat	Forb	Annual

TABLE II. (Continued)

Code	Genus-Species	Common Name	Life Form	Longevity
POAM	Poa ampla	Big bluegrass	Grass	Perennial
POCA	Poa canbyi	Canby bluegrass	Grass	Perennial
POFE	Poa fendleriana	Mutton bluegrass	Grass	Perennial
POSE	Poa secunda	Sandberg bluegrass	Grass	Perennial
POL	Polygonum spp.	Knotweed, Smartweed	Forb	Perennial
POAV	Polygonum aviculare	Prostrate knotweed	Forb	Annual
PSTE	Psoralea tenuiflora	Slimflower scurfpea	Forb	Perennial
RHTR	Rhus trilobata	Skunkbush sumac	Shrub	Perennial
SAIB	Salsola iberica	Russian thistle	Forb	Annual
SAVE	Sarcobatus vermiculatus	Greasewood	Shrub	Perennial
SELA	Sedum lanceolatum	Lanceleaf stonecrop	Forb	Perennial
SEST	Sedum stenopetalum	Wormleaf stonecrop	Forb	Perennial
SEDE	Selaginella densa	Spikemoss selaginella	Clubmoss	Perennial
SECA	Senecio canus	Woolly groundsel	Forb	Perennial
SEIN	Senecia integerrimus	Lambstongue groundsel	Forb	Perennial
SIAL	Sisymbrium altissimum	Tumbling hedgemustard	Forb	Annual
SILI	Sisymbrium linifolium	Narrowleaf hedgemustard	Forb	Perennial
SIHY	Sitanion hystrix	Squirreltail bottlebrush	Grass	Perennial
SPCO	Sphaeralcea coccinea	Scarlet globemallow	Forb	Perennial
STCO	Stipa comata	Needleandthread	Grass	Perennial
STVI	Stipa viridula	Green needlegrass	Grass	Perennial
SYOC	Symphoricarpos occidentalis	Western snowberry	Shrub	Perennial
TAOF	Taraxacum officinale	Common dandelion	Forb	Perennial
TECA	Tetradymia canescens	Gray horsebrush	Shrub	Perennial
TENU	Tetradymia nuttallii	Nuttall horsebrush	Shrub	Perennial
TESP	Tetradymia spinosa	Cottonthorn horsebrush	Shrub	Perennial
THAR	Thlaspi arvense	Fanweed	Forb	Annual
TOIN	Townsendia incana	Hoary townsendia	Forb	Perennial
TRDU	Tragopogon dubius	Yellow salsify	Forb	Biennial
TRGY	Trifolium gymnocarpon	Hollyleaf clover	Forb	Perennial
TRI	Trifolium spp.	Clover	Forb	Perennial
UMB	Umbelliferae fam.	Falsecarrot	Forb	Perennial
VIAM	Vicia americana	American vetch	Forb	Perennial
VIVA	Viola vallicola	Nuttall violet	Forb	Perennial
VINU	Viola nuttallii	Nuttall violet	Forb	Perennial
VIO	Viola spp.	Violet	Forb	Perennial
VUOC	Vulpia octoflora	Common sixweeksgrass	Grass	Annual
WYAM	Wyethia amplexicaulis	Mulesear wyethia	Forb	Perennial
XASA	Xanthocephalum sarothrae	Broom snakeweed	Half-shrub	Perennial
YUGL	Yucca glauca	Small soapweed	Forb	Perennial
ZIPA	Zigadenus paniculatus	Foothill death camus	Forb	Perennial
ZIVE	Zigadenus venenosus	Death camus	Forb	Perennial

Figure 1. Phenological progression curve for 1982 for each of the prime species at each exclosure. Current year compared to earliest and latest phenological development from 1973 through 1981.

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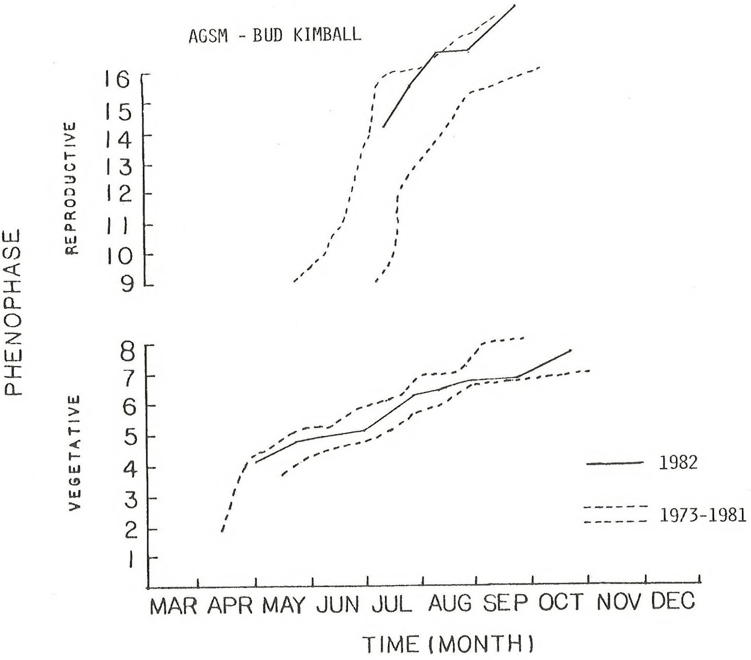
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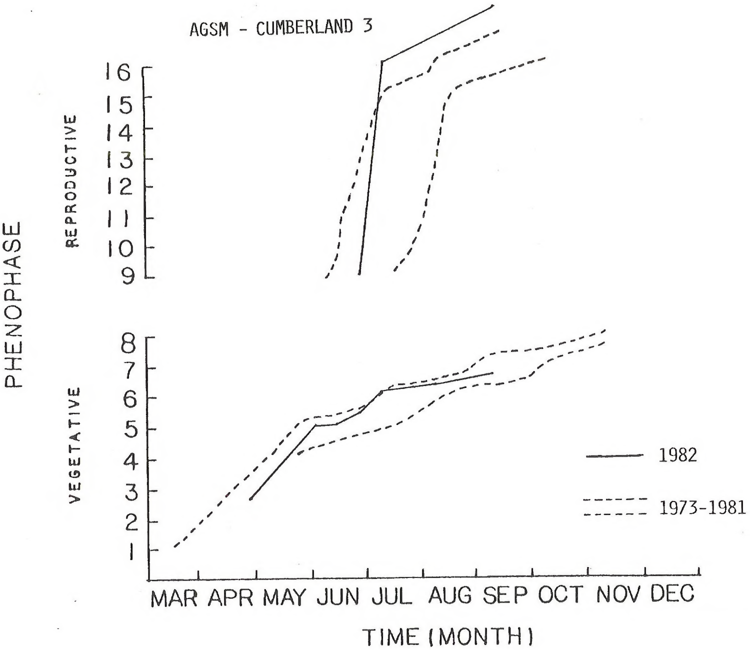
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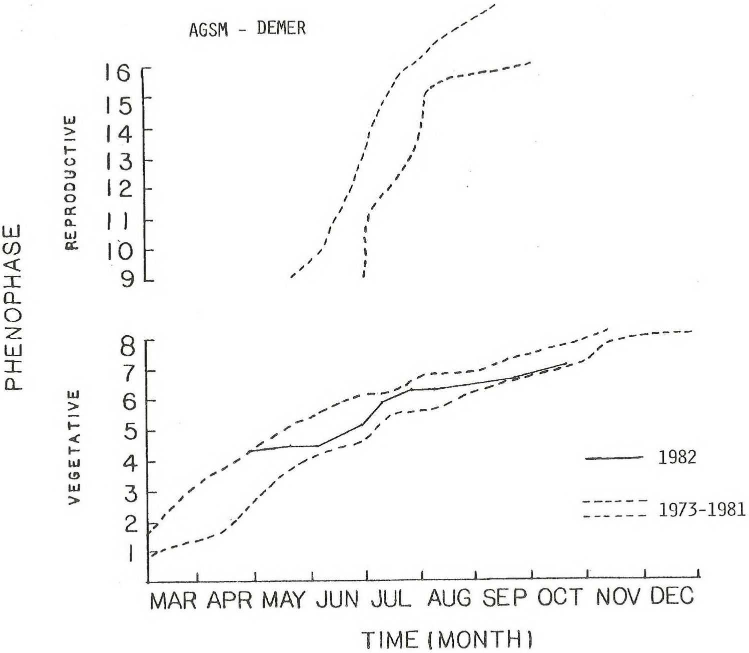

AGSM - DEMER
PHENOPHASE
REPRODUCTIVE
VEGETATIVE
16
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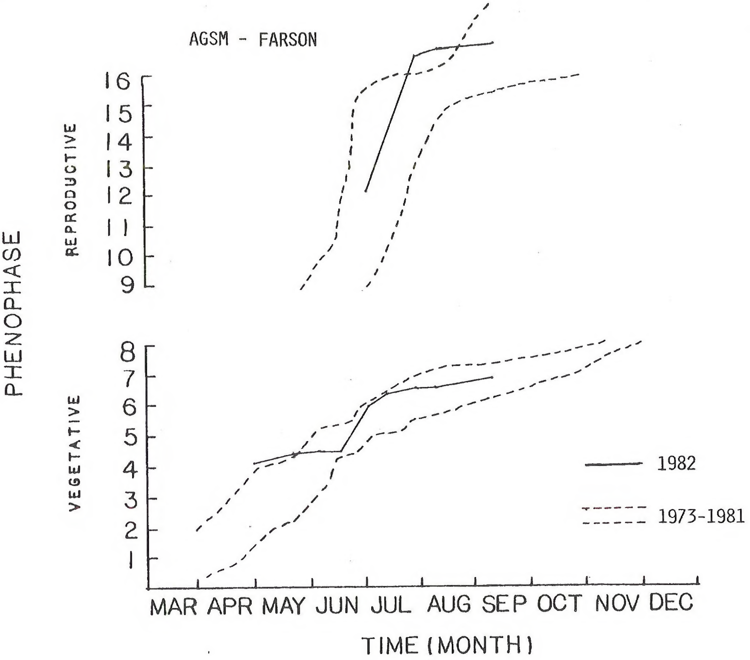
OCT
NOV
DEC
TIME (MONTH)
1982
1973-1981


AGSM - FARSON
PHENOPHASE
REPRODUCTIVE
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VEGETATIVE
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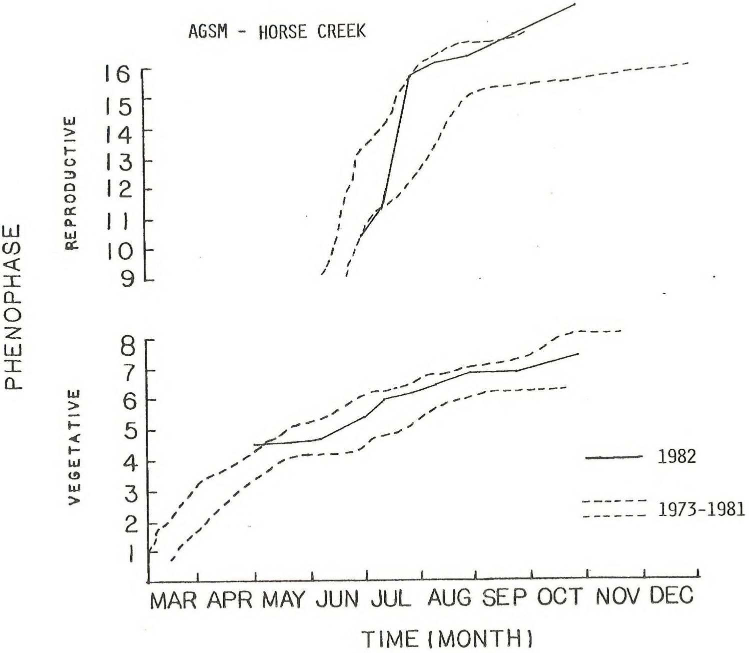
MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
TIME (MONTH)
1982
1973-1981


AGSM - HORSE CREEK
PHENOPHASE
REPRODUCTIVE
16
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VEGETATIVE
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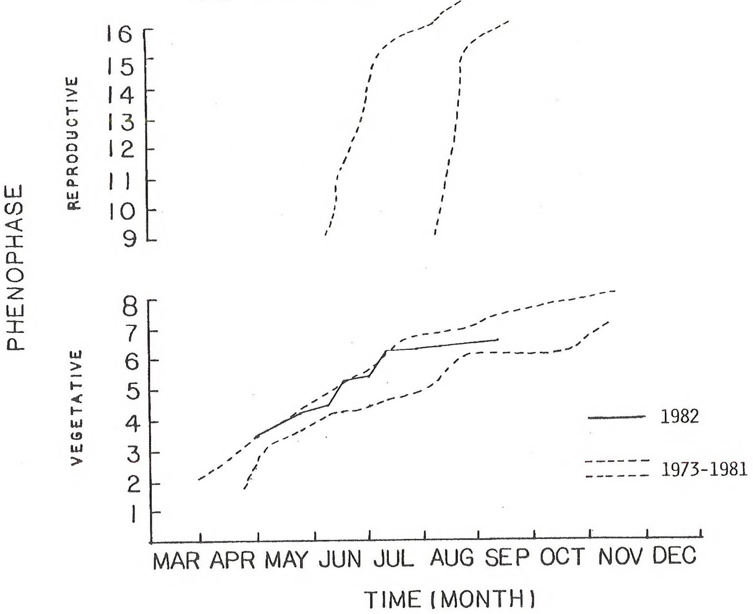
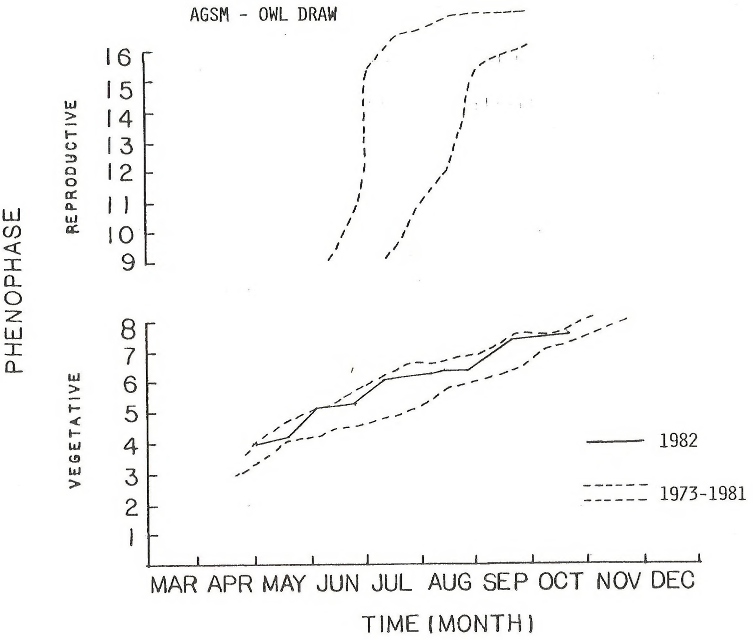
MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
TIME (MONTH)
1982
1973-1981

AGSM - MESA ANTELOPE




AGSM - OWL DRAW
PHENOPHASE
REPRODUCTIVE
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VEGETATIVE
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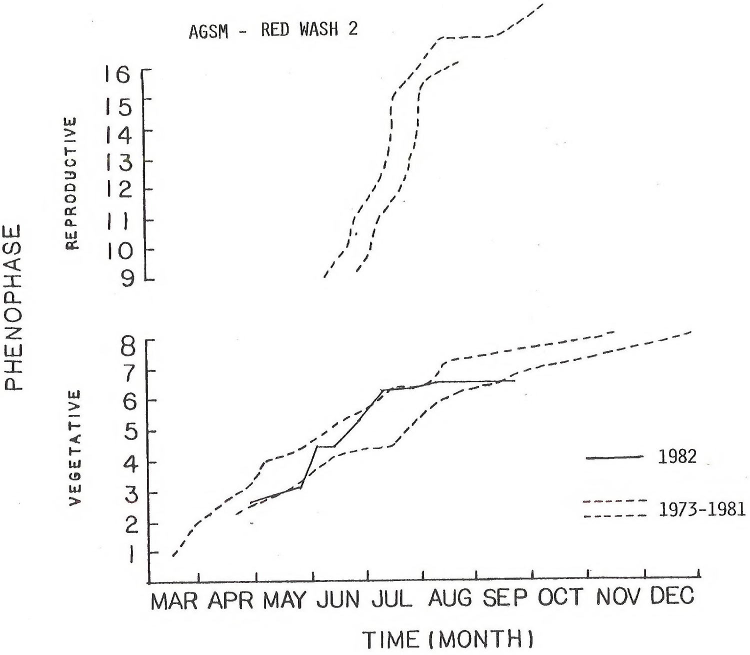
MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
TIME (MONTH)
1982
1973-1981


AGSM - RED WASH 2
PHENOPHASE
REPRODUCTIVE
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VEGETATIVE
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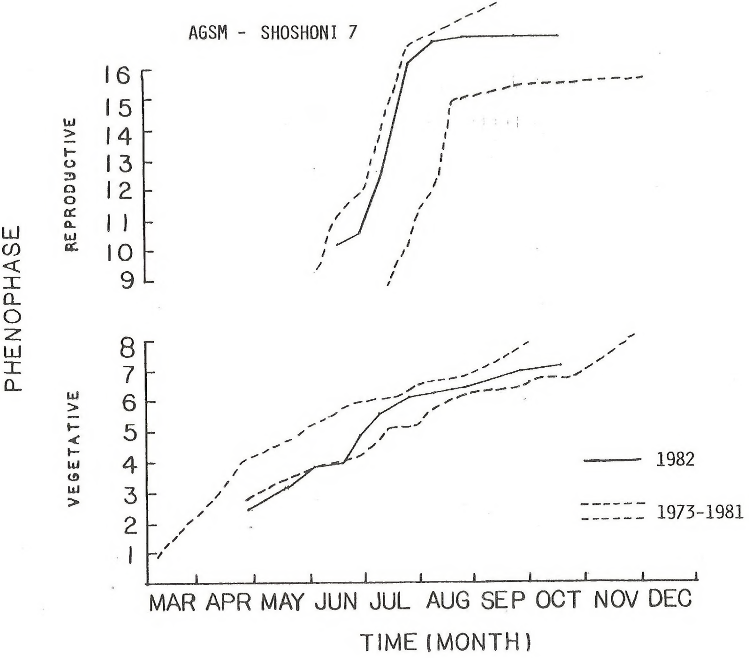
MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
TIME (MONTH)
1982
1973-1981


AGSM - SHOSHONI 7
PHENOPHASE
REPRODUCTIVE
VEGETATIVE
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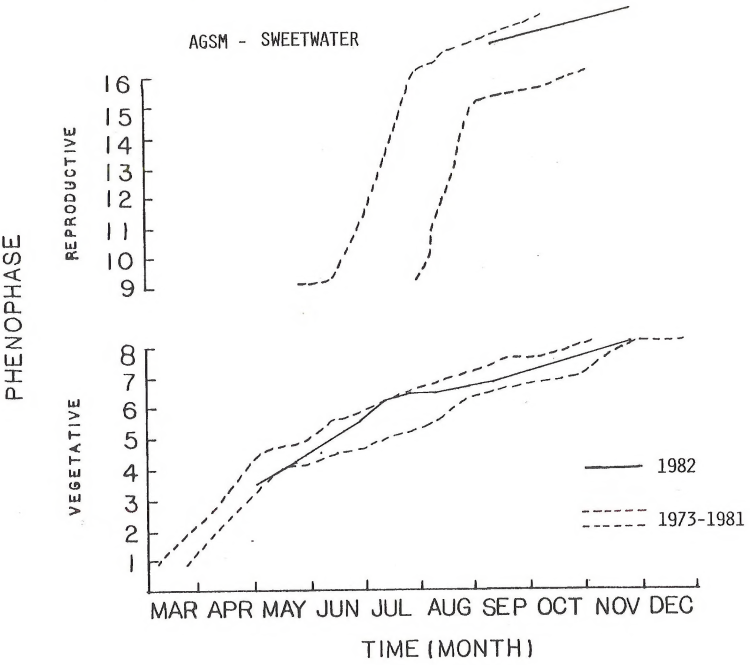
MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
TIME (MONTH)
1982
1973-1981


AGSM - SWEETWATER
PHENOPHASE
REPRODUCTIVE
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VEGETATIVE
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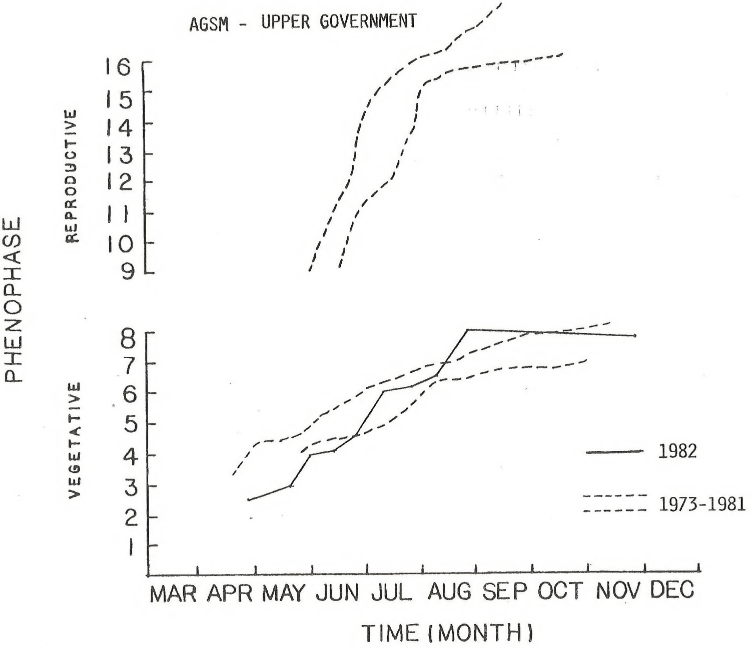
SEP
OCT
NOV
DEC
TIME (MONTH)
1982
1973-1981


AGSM - UPPER GOVERNMENT
PHENOPHASE
REPRODUCTIVE
16
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VEGETATIVE
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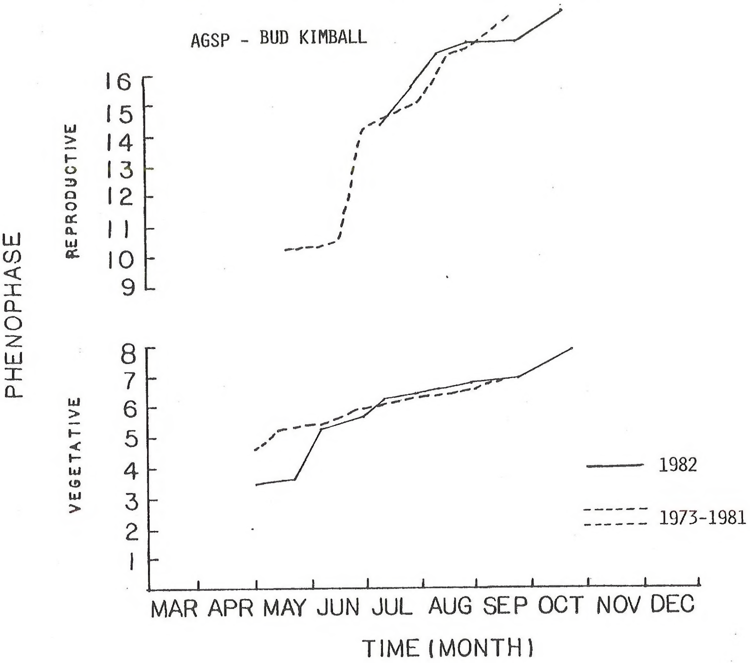
1982
1973-1981
MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
TIME (MONTH)


AGSP - BUD KIMBALL
PHENOPHASE
REPRODUCTIVE
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VEGETATIVE
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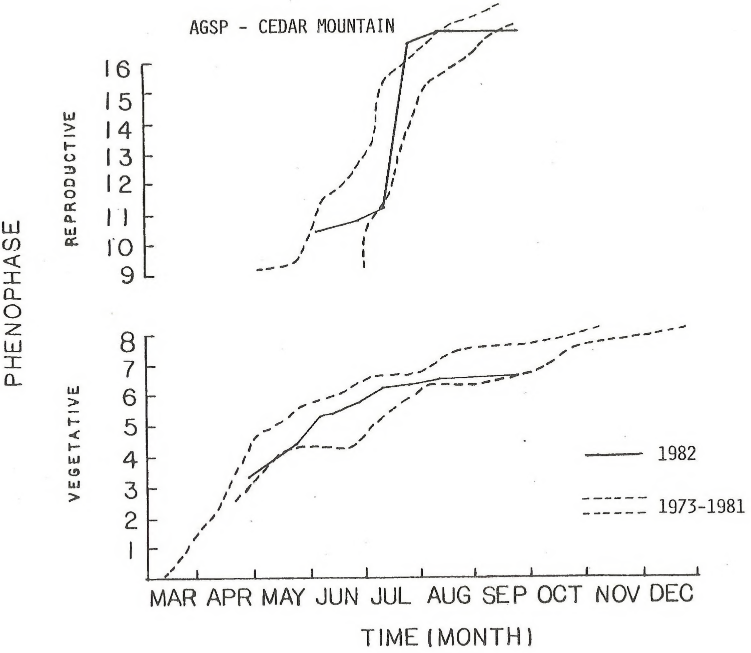
OCT
NOV
DEC
TIME (MONTH)
1982
1973-1981


AGSP - CEDAR MOUNTAIN
PHENOPHASE
REPRODUCTIVE
VEGETATIVE
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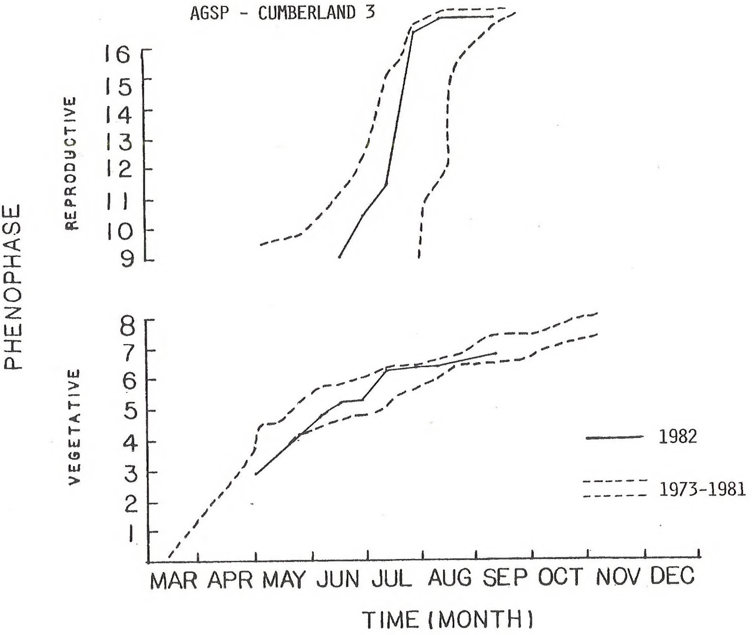
OCT
NOV
DEC
TIME (MONTH)
1982
1973-1981


AGSP - CUMBERLAND 3
PHENOPHASE
REPRODUCTIVE
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VEGETATIVE
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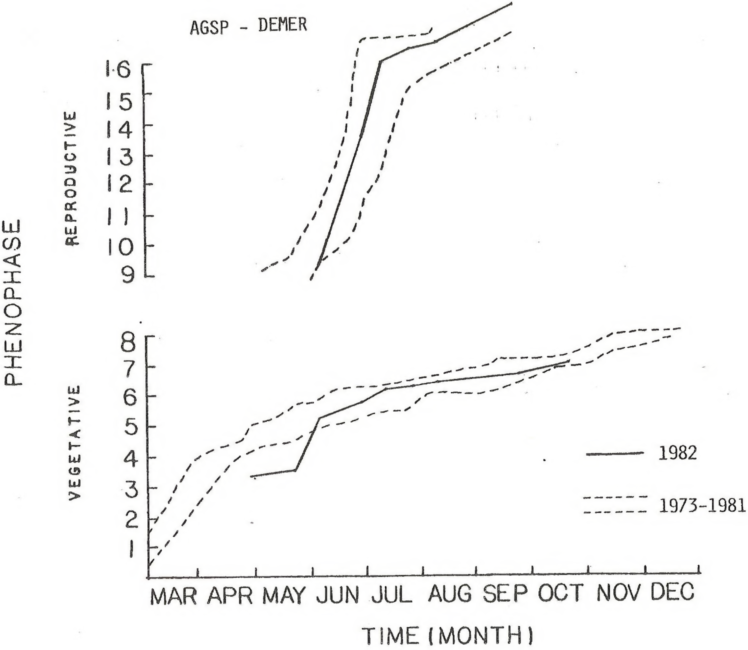
DEC
TIME (MONTH)
1982
1973-1981


AGSP - DEMER
PHENOPHASE
REPRODUCTIVE
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VEGETATIVE
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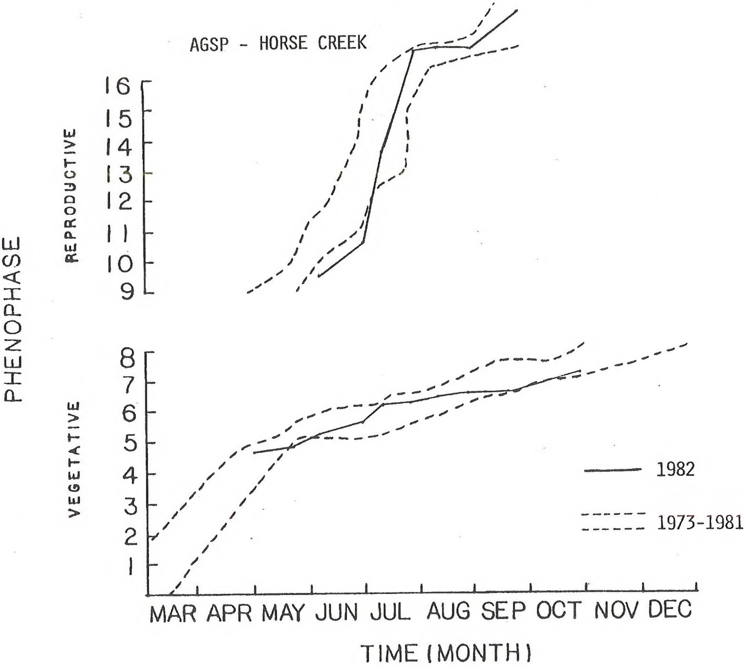
DEC
TIME (MONTH)
1982
1973-1981


AGSP - HORSE CREEK
PHENOPHASE
REPRODUCTIVE
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VEGETATIVE
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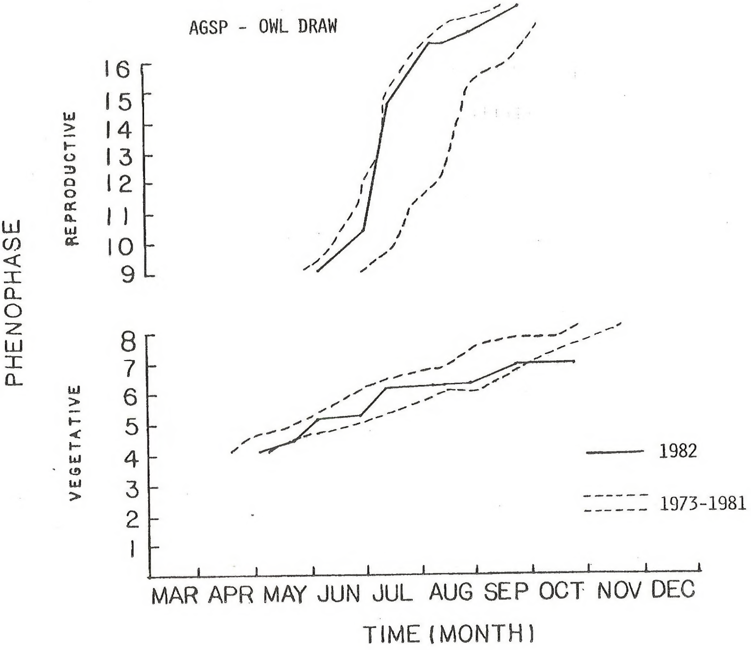
DEC
TIME (MONTH)
1982
1973-1981


AGSP - OWL DRAW
PHENOPHASE
REPRODUCTIVE
VEGETATIVE
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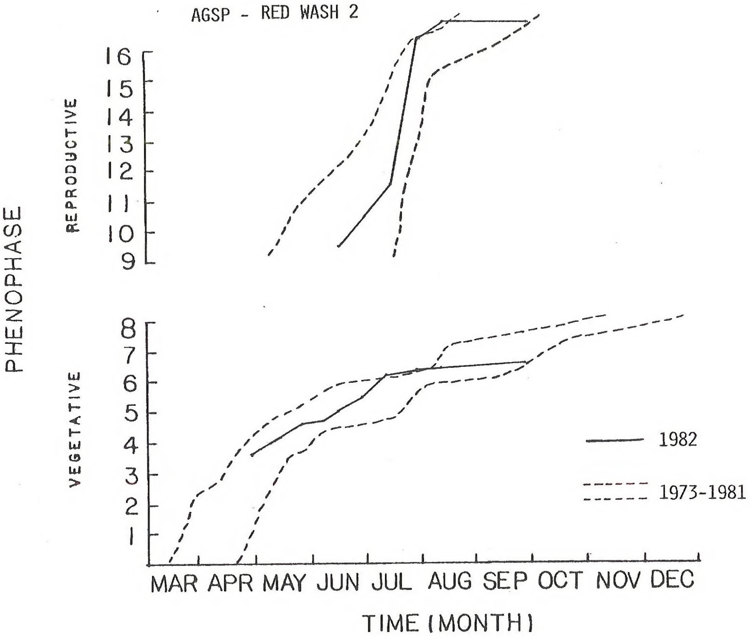
MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
TIME (MONTH)
1982
1973-1981


AGSP - RED WASH 2
PHENOPHASE
REPRODUCTIVE
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VEGETATIVE
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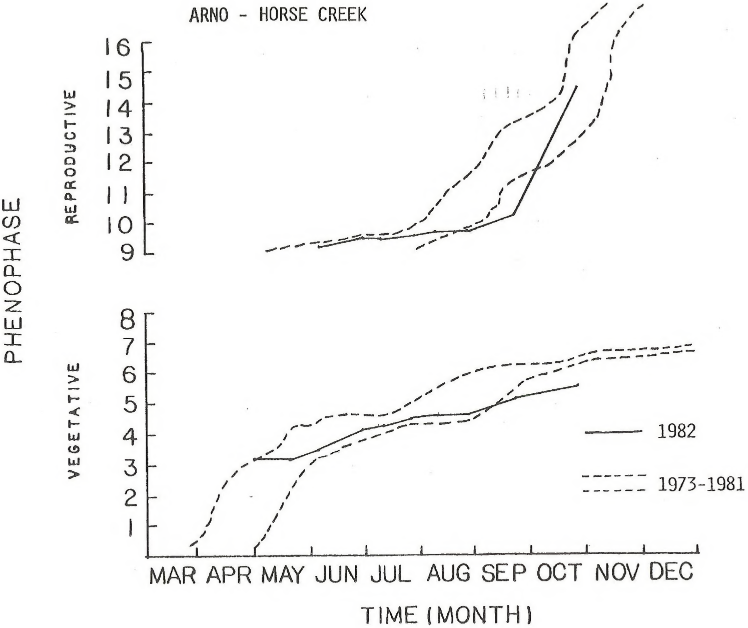
DEC
TIME (MONTH)
1982
1973-1981


ARNO - HORSE CREEK
PHENOPHASE
REPRODUCTIVE
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VEGETATIVE
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1982
1973-1981
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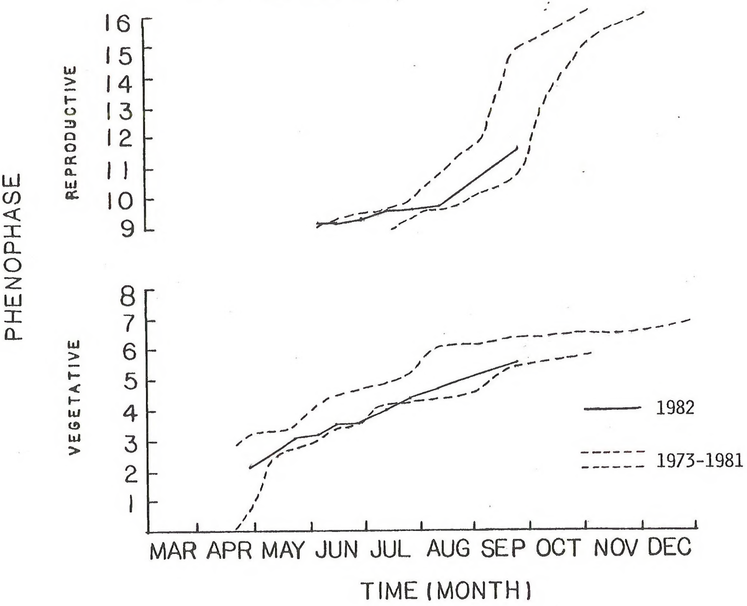
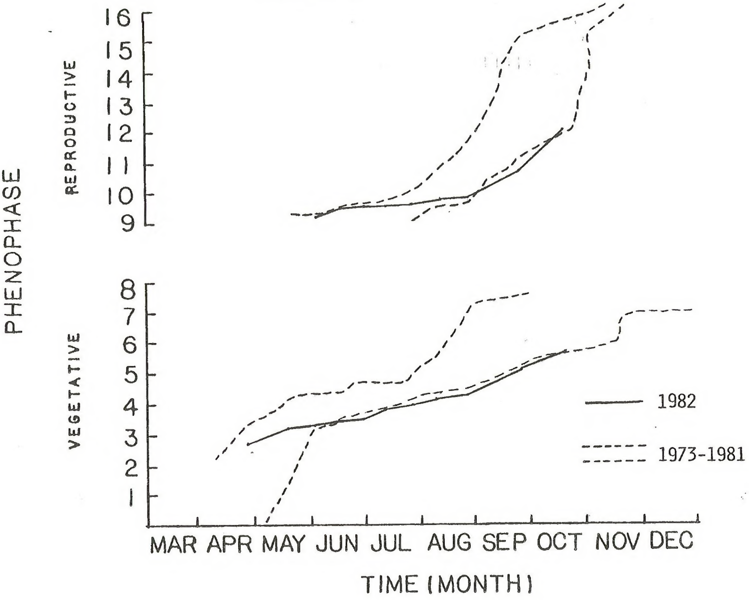
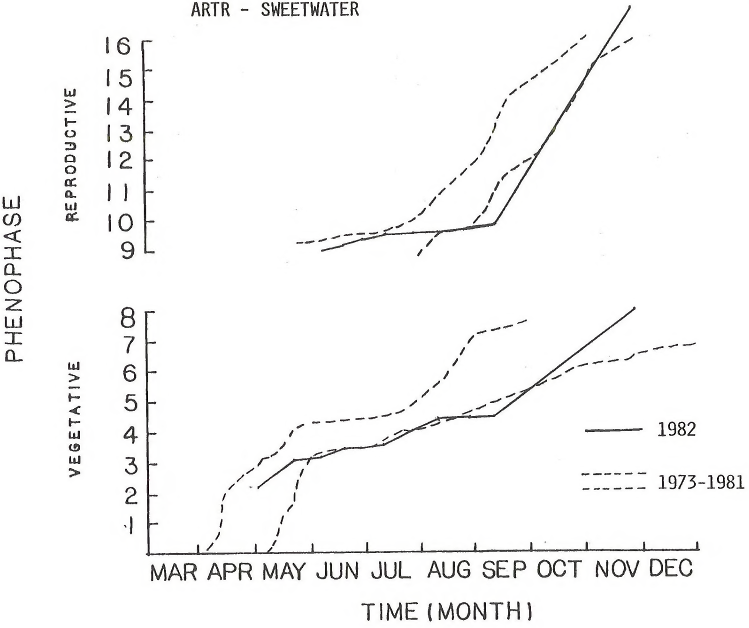
OCT
NOV
DEC
TIME (MONTH)

ARTR - RED WASH 2



ARTR - SHOSHONI 7




ARTR - SWEETWATER
PHENOPHASE
REPRODUCTIVE
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VEGETATIVE
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TIME (MONTH)
1982
1973-1981

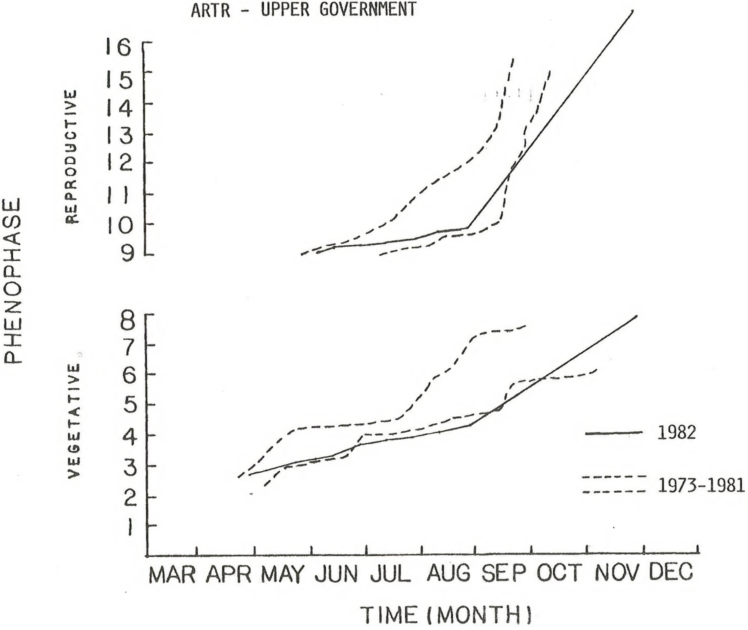
ARTR - UPPER GOVERNMENT

TABLE III. All species phenological survey for 1982 by date for each exclosure.

	Page
Bud Kimball Exclosure	47
Cedar Mountain Exclosure	48
Cumberland #3 Exclosure	49
Demer Exclosure	50
Farson Exclosure	51
Horse Creek Exclosure	52
Mesa Antelope Exclosure	53
Owl Draw Exclosure	54
Red Wash #2 Exclosure	56
Shoshone #7 Exclosure	57
Sweetwater Exclosure	58
Upper Government Exclosure	59

PHENOLOGICAL INVENTORY STUDY AREA 8UO KIMBAL 1982 TYPE SITE ARTR-AGSM

	SPECIES	30 APRI		18 MAY		2 JUNE		14 JUNE		29 JUNE		10 JULY		26 JULY		9 AUG		28 AUG		17 SEPT		16 OCT			
		VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPK	VEG	REPR	VEG	REPR	VEG	REPR	VER	REPR
1	AGCR	4.5	0.0	4.7	0.0	5.2	0.0	0.0	0.0	5.2	10.3	5.5	14.0	5.8	16.0	6.1	16.9	6.3	16.9	6.4	16.9	6.7	18.0	0.0	0.0
2	AGGL	3.9	0.0	4.1	0.0	4.5	0.0	0.0	0.0	5.2	10.4	5.7	12.3	6.2	16.2	6.9	18.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	AGSM	4.4	0.0	4.9	0.0	5.0	0.0	0.0	0.0	5.2	0.0	6.1	14.1	6.3	15.5	6.5	16.5	6.8	16.7	6.9	18.0	7.6	0.0	0.0	0.0
4	AGSP	3.5	0.0	3.6	0.0	5.2	0.0	0.0	0.0	5.7	11.9	6.1	14.7	6.3	16.1	6.5	16.4	6.7	16.8	6.8	18.0	7.0	0.0	0.0	0.0
5	ALTE	3.8	9.4	4.4	10.1	4.6	10.7	0.0	0.0	6.0	14.6	6.5	16.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	ANDI	4.3	10.1	4.5	10.3	4.8	10.8	0.0	0.0	5.6	12.7	5.8	14.7	6.2	15.7	6.5	16.5	6.7	16.8	8.0	16.9	0.0	18.0	0.0	0.0
7	ARHO2	4.0	11.5	4.3	12.2	4.6	12.5	0.0	0.0	6.1	14.9	8.0	15.5	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	ARTR	3.2	0.0	3.3	0.0	3.5	9.1	0.0	0.0	4.1	9.4	4.2	9.5	4.6	9.5	4.6	9.7	4.6	9.8	5.2	10.4	5.8	12.5	0.0	0.0
9	ASPU	4.0	9.4	4.2	9.6	4.4	10.6	0.0	0.0	6.0	14.0	6.8	15.8	8.0	16.0	0.0	16.3	0.0	16.4	0.0	16.9	0.0	18.0	0.0	0.0
10	BOGR	3.5	0.0	3.9	0.0	4.0	0.0	0.0	0.0	5.2	0.0	5.4	0.0	5.5	0.0	5.9	0.0	6.0	0.0	6.0	0.0	7.2	0.0	0.0	0.0
11	BRJA	4.5	0.0	4.8	9.1	5.0	9.4	0.0	0.0	5.7	10.5	6.8	14.9	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	BRTE	4.5	9.0	4.8	9.4	5.0	9.7	0.0	0.0	6.2	14.0	6.9	15.8	8.0	16.8	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	CACH	4.1	10.0	4.6	10.7	5.0	11.5	0.0	0.0	6.0	13.1	6.8	14.9	8.0	16.1	0.0	16.9	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
14	CAMI	4.3	10.1	4.5	10.3	4.8	10.7	0.0	0.0	5.5	13.0	5.9	14.8	6.1	15.8	6.4	16.4	6.6	16.7	6.8	16.9	8.0	18.0	0.0	0.0
15	CANU	4.1	0.0	4.6	0.0	4.8	9.1	0.0	0.0	5.2	13.0	5.6	15.0	6.3	16.0	6.9	16.8	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
16	COPA2	4.1	0.0	4.2	0.0	4.5	0.0	0.0	0.0	5.5	0.0	5.9	0.0	6.2	0.0	6.5	0.0	6.6	0.0	6.7	0.0	6.9	0.0	0.0	0.0
17	CRMO	3.9	0.0	4.3	9.2	4.6	10.8	0.0	0.0	5.8	15.9	6.0	16.0	6.3	16.8	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	DEPI	4.0	9.0	4.2	9.5	4.6	10.7	0.0	0.0	6.2	15.5	6.8	15.5	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	ERPU	4.2	9.3	4.5	9.5	4.9	11.1	0.0	0.0	5.8	12.7	5.9	12.9	6.2	16.0	6.8	18.0	6.9	0.0	6.9	0.0	6.9	0.0	0.0	0.0
20	HAGL	2.5	0.0	3.0	0.0	3.5	0.0	0.0	0.0	4.2	0.0	4.6	0.0	4.9	0.0	5.2	9.2	5.4	9.9	5.7	11.5	8.0	16.5	0.0	0.0
21	KOCR	4.5	0.0	4.6	0.0	4.8	9.4	0.0	0.0	6.0	16.2	6.9	16.8	6.9	18.0	6.9	0.0	6.9	0.0	8.0	0.0	7.4	0.0	0.0	0.0
22	LARE	0.0	0.0	5.3	10.6	5.4	11.4	0.0	0.0	5.8	13.1	6.0	14.5	6.8	16.0	8.0	16.9	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
23	LEDE	0.0	0.0	0.0	0.0	5.0	10.5	0.0	0.0	6.0	14.5	8.0	15.5	8.0	16.9	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	LERE	4.0	0.0	4.6	9.8	5.2	10.2	0.0	0.0	6.9	12.7	8.0	15.7	0.0	16.8	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	LOGR	4.0	10.6	4.6	11.5	5.1	12.9	0.0	0.0	6.4	15.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	MACA	3.9	4.3	9.1	4.6	9.4	0.0	0.0	0.0	5.4	11.7	5.8	14.0	6.1	15.7	6.4	18.0	6.6	0.0	6.8	0.0	6.9	0.0	0.0	0.0
27	MAGL	4.0	0.0	4.2	0.0	4.4	0.0	0.0	0.0	5.2	0.0	5.7	0.0	6.0	0.0	6.3	0.0	6.5	0.0	6.7	0.0	6.9	0.0	0.0	0.0
28	MIGR	0.0	0.0	0.0	0.0	4.8	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	OECO	3.2	0.0	3.4	0.0	4.3	10.1	0.0	0.0	5.7	13.0	5.8	14.0	6.0	15.0	6.3	18.0	6.5	0.0	6.6	0.0	6.9	0.0	0.0	0.0
30	OPPO	3.5	0.0	3.6	0.0	3.8	9.1	0.0	0.0	4.6	10.4	5.0	11.7	5.3	15.0	5.5	15.8	5.6	15.9	5.7	16.1	6.0	16.7	0.0	0.0
31	PHHO	4.5	11.4	4.8	11.7	5.0	12.5	0.0	0.0	5.9	16.0	6.0	16.5	6.5	18.0	6.8	0.0	6.9	0.0	8.0	0.0	0.0	0.0	0.0	0.0
32	PLPA	3.5	0.0	4.0	0.0	4.3	0.0	0.0	0.0	5.9	11.5	6.1	15.0	6.9	16.8	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
33	POSE	4.3	0.0	4.5	9.1	4.7	9.8	0.0	0.0	6.3	15.9	6.4	16.5	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34	SIHY	3.8	0.0	4.0	0.0	4.7	0.0	0.0	0.0	5.2	10.3	6.3	15.4	6.5	16.2	6.8	16.8	6.9	16.9	7.7	18.0	0.0	0.0	0.0	0.0
35	SPCO	4.2	0.0	4.4	0.0	4.6	0.0	0.0	0.0	5.6	0.0	5.7	0.0	6.0	0.0	6.1	0.0	6.2	0.0	6.2	0.0	6.4	0.0	0.0	0.0
36	STCO	3.6	0.0	3.8	0.0	4.4	0.0	0.0	0.0	5.6	10.5	6.0	16.0	6.3	16.8	6.5	16.9	6.6	16.9	6.6	16.9	7.4	18.0	0.0	0.0
37	TAOF	5.0	9.4	5.2	10.1	5.5	11.6	0.0	0.0	6.0	16.4	6.1	16.6	6.4	18.0	6.9	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	TRDU	4.3	0.0	4.8	0.0	5.0	9.3	0.0	0.0	5.8	14.0	5.8	15.4	6.2	16.5	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39	VIAM	4.7	0.0	4.8	9.2	5.0	10.6	0.0	0.0	5.5	0.0	5.7	0.0	6.2	0.0	6.5	0.0	6.8	0.0	8.0	0.0	0.0	0.0	0.0	0.0
40	VINU	0.0	0.0	5.0	10.2	5.1	10.4	0.0	0.0	5.3	14.0	5.8	15.0	6.2	16.2	6.3	16.8	6.4	16.9	6.4	18.0	6.9	0.0	0.0	0.0
41	VUOC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6	12.5	8.0	16.5	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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PHENOLOGICAL INVENTORY      STUDY AREA  CEDAR MT          1982     TYPE SITE ARTR-AGSP
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               29 APRI    20 MAY     2 JUNE     14 JUNE    29 JUNE    11 JULY    25 JULY    10 AUG     18 SEPT
     SPECIES   VEG REPR   VEG REPR   VEG REPR   VEG REPR   VEG REPR   VEG REPR   VEG REPR   VEG REPR   VEG REPR   VEG REPR   VEG REPR   VER REPR
*********************************************************************************************************************************************

  1  AGCR      4.4  0.0   4.8  9.2   5.0  9.5   5.5  9.8   5.7 10.0   5.9 14.0   6.3 14.8   6.4 16.2   6.5 16.7   0.0  0.0   0.0  0.0   0.0  0.0
  2  AGSP      3.3  0.0   4.4  0.0   5.3 10.4   5.4 10.4   5.8 10.8   6.2 11.1   6.3 16.5   6.4 16.9   6.6 16.9   0.0  0.0   0.0  0.0   0.0  0.0
  3  ARFR      0.0  0.0   3.6  0.0   0.0  0.0   4.3  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   5.8 11.8   0.0  0.0   0.0  0.0   0.0  0.0
  4  ARHO      0.0  0.0   4.2  9.6   5.0 10.5   5.2 10.8   5.4 11.0   6.0 15.0   6.3 15.7   6.7 16.8   7.1 18.0   0.0  0.0   0.0  0.0   0.0  0.0
  5  ARHO2     3.0  0.0   3.6  0.0   3.0 12.6   4.5 14.0   5.5 15.0   6.2 15.7   6.7 16.5   8.0 18.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
  6  ARSP      3.8  0.0   4.2  9.8   5.0 10.5   5.2 11.0   6.3 16.1   6.4 16.3   8.0 18.0   0.0  0.0   7.1  0.0   0.0  0.0   0.0  0.0   0.0  0.0
  7  ARTR      2.5  0.0   3.2  0.0   3.3  9.2   3.8  9.3   3.9  9.5   4.0  9.6   4.3  9.6   4.9  9.7   5.3 11.5   0.0  0.0   0.0  0.0   0.0  0.0
  8  ASPU      3.4 10.0   4.2 11.0   5.0 14.0   5.3 14.2   5.6 15.3   6.2 16.0   6.5 16.7   6.8 18.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
  9  ATCU      3.0  0.0   3.6  0.0   4.0 10.0   4.5 10.1   5.0 10.3   5.6 12.9   6.0 14.0   6.2 16.0   6.3 16.7   0.0  0.0   0.0  0.0   0.0  0.0
 10  ATGA      3.1  0.0   3.7  0.0   5.1 10.1   5.2 10.3   5.5 10.5   5.9 13.5   6.2 14.5   6.4 15.9   6.8 16.1   0.0  0.0   0.0  0.0   0.0  0.0
 11  CALI      0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   5.8 12.3   6.1 14.0   6.3 15.4   6.7 16.5   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 12  CELA      2.5  0.0   3.2  0.0   3.7  0.0   4.0  0.0   5.0  9.5   5.3 10.3   5.6 11.0   5.9 13.0   6.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 13  CHOE      0.0  0.0   4.0 11.3   4.5 11.7   5.1 12.0   5.4 12.6   5.9 14.8   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 14  CHVI      3.2  0.0   4.0  0.0   4.1  0.0   4.4  0.0   5.0  9.5   5.7 10.3   5.8 10.7   6.0 12.6   6.0 13.1   0.0  0.0   0.0  0.0   0.0  0.0
 15  CRMO      0.0  0.0   0.0  0.0   5.0 11.5   5.2 11.7   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 16  CRMO      0.0  0.0   4.2  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 17  CYMO      0.0  0.0   3.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 18  ERPU      0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   5.8 11.6   6.3 13.1   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 19  EROV      2.9  0.0   3.3  0.0   4.5  0.0   5.1 12.0   6.4 14.8   6.5 15.2   6.6 16.1   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 20  GRSP      3.0  0.0   4.1  0.0   5.0  0.0   5.3  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 21  HAAC      3.0  0.0   3.8  9.8   3.9 10.5   4.1 10.9   5.9 15.4   6.0 16.2   6.2 16.7   6.4 18.0   6.8  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 22  HAGL      2.5  0.0   3.4  0.0   0.0  0.0   4.3  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 23  KOAM      2.0  0.0   3.5  0.0   3.7  0.0   4.0  0.0   4.2  0.0   5.0  9.0   5.6  9.1   6.6 10.1   6.4 13.2   0.0  0.0   0.0  0.0   0.0  0.0
 24  LARE      0.0  0.0   3.8  9.5   3.9 10.5   4.0 11.1   6.0 14.4   6.7 16.2   6.9 16.7   8.0 18.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 25  LOCR      3.4 10.0   4.0 11.6   4.2 12.0   4.4 12.5   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 26  MAGR      3.0  0.0   3.9  0.0   4.5  9.9   4.9 11.6   5.1 11.8   5.6 12.0   6.1 14.0   6.4 15.1   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 27  OPPO      2.0  0.0   2.5  0.0   2.5  0.0   2.6  0.0   2.8  0.0   4.3  0.0   5.0  0.0   5.5  0.0   6.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 28  ORFA      0.0  0.0   4.3  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 29  ORHY      3.7  0.0   4.2  0.0   4.3  0.0   4.6  0.0   5.5 14.6   6.0 15.7   6.1 16.0   6.4 18.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 30  PEFR      2.9  0.0   3.6  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 31  PHHO      3.0  9.9   3.8 11.5   4.0 12.0   4.5 12.8   5.0 13.2   6.1 16.0   6.2 16.5   6.6 18.0   7.1  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 32  PHLO      2.8  0.0   4.0 10.6   5.1 11.0   5.3 11.4   5.6 12.0   6.2 15.5   8.0 18.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 33  POSE      4.4  0.0   4.8  9.8   4.9 10.0   5.1 10.5   5.3 10.7   6.1 16.0   8.0 16.7   0.0 16.9   7.1  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 34  SILI      0.0  0.0   4.0 10.0   4.9 10.8   5.0 11.2   5.9 12.2   6.5 15.9   6.8 16.3   8.0 16.8   7.1  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 35  SIHY      4.1  0.0   4.5  0.0   4.6  9.0   4.9  9.4   5.4 10.2   6.0 15.3   6.1 16.5   6.4 16.7   6.8 16.9   0.0  0.0   0.0  0.0   0.0  0.0
 36  SIAL      0.0  0.0   4.3 10.9   4.7 11.5   5.1 12.0   5.4 12.4   6.2 16.0   6.5 16.3   6.8 16.8   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 37  SPCO      3.0  0.0   3.8  0.0   4.0  9.6   4.3 10.9   5.1 16.0   5.6 16.6   5.8 16.8   6.0 18.0   6.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 38  TAOF      0.0  0.0   4.2  9.8   4.6 10.8   5.0 11.5   5.5 13.7   5.9 15.3   6.2 16.4   6.5 18.0   7.1  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 39  TENU      3.1  0.0   3.8  0.0   3.9  9.1   4.1  9.3   5.1 10.0   5.4 11.5   5.8 15.0   6.4 16.4   6.9 18.0   0.0  0.0   0.0  0.0   0.0  0.0
 40  TESP      3.2  0.0   3.9  0.0   5.0  9.5   5.2  9.8   6.0 11.0   6.6 12.3   6.6 14.0   6.7 15.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 41  TOIN      0.0  0.0   4.0 10.0   4.1 10.5   4.5 10.8   4.8 11.0   5.7 12.1   6.0 12.7   6.3 13.4   6.3 13.4   0.0  0.0   0.0  0.0   0.0  0.0
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PHENOLOGICAL INVENTORY   STUDY AREA CUMBER #3   1982   TYPE SITE ARTR-AGSM-AGSP

		30 APRI		2 JUNE		15 JUNE		29 JUNE		11 JULY		27 JULY		9 AUG		10 SEPT									
	SPECIES	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VER	REPR
1	ACMI	2.0	0.0	3.8	0.0	4.2	9.3	4.9	9.5	5.9	10.0	6.0	11.5	6.1	12.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	AGGL	0.0	0.0	5.0	10.0	5.2	11.0	6.8	16.7	6.9	16.8	8.0	16.9	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	AGSM	2.8	0.0	5.1	0.0	5.2	0.0	5.7	9.0	6.2	16.0	6.4	0.0	6.5	0.0	6.8	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	AGSP	3.0	0.0	4.9	0.0	5.3	9.0	5.4	10.5	6.2	11.4	6.4	16.6	6.4	16.9	6.9	16.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	AMAL	1.0	0.0	5.1	9.5	5.2	11.3	5.5	12.5	5.7	14.5	5.9	14.8	6.0	15.1	6.4	16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	AND1	0.0	0.0	5.2	12.1	5.5	12.6	5.8	14.0	6.3	16.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	ARHO2	0.0	0.0	5.5	11.3	5.6	13.2	6.5	14.6	6.9	16.0	8.0	16.4	0.0	16.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	ARTR	2.5	0.0	3.4	9.2	3.6	9.2	3.9	9.4	4.1	9.6	4.5	9.6	4.9	9.7	4.9	10.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	ASCI	2.5	0.0	5.0	11.1	5.2	11.6	5.5	11.8	5.9	14.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	ASDI	2.9	0.0	5.0	11.2	5.5	12.8	5.8	14.5	6.2	16.0	6.5	16.9	6.8	18.0	6.9	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	ASPU	2.8	0.0	5.0	11.1	5.4	12.6	6.8	14.5	6.9	15.9	6.9	18.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	ASMI	3.0	0.0	5.0	11.1	5.2	13.4	6.2	14.0	6.7	16.0	6.9	18.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	BRTE	0.0	0.0	5.8	11.0	5.8	11.4	6.6	10.5	6.8	16.4	8.0	16.8	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	CANU	0.0	0.0	5.0	0.0	5.3	11.0	5.5	11.4	5.8	12.5	6.3	13.5	6.5	16.0	6.9	16.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	CALI	0.0	0.0	0.0	0.0	4.5	11.5	5.9	12.0	5.9	12.4	6.3	13.1	6.6	15.6	6.9	16.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	CHVI	3.0	0.0	4.0	0.0	4.3	0.0	4.8	0.0	5.4	9.5	5.4	10.5	6.0	11.9	6.2	12.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	COPA	0.0	0.0	5.6	10.0	5.7	10.3	5.8	12.5	5.9	12.9	6.1	16.2	6.6	18.0	6.7	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	COPA2	0.0	0.0	0.0	0.0	5.8	13.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	CRAC	3.0	0.0	5.3	11.0	5.5	11.7	5.9	12.4	6.0	12.9	8.0	16.3	0.0	16.8	7.3	16.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	CRFL	0.0	0.0	0.0	0.0	5.5	11.9	5.9	13.3	6.0	13.5	6.0	13.8	6.6	15.9	6.8	16.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	CYMO	0.0	0.0	0.0	0.0	5.4	0.0	6.0	14.5	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	DEPI	2.1	0.0	5.8	11.3	5.8	12.8	6.1	13.0	6.7	15.8	6.6	15.8	8.0	18.0	7.5	12.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	ERPU	0.0	0.0	3.0	10.5	4.2	11.3	5.2	12.5	5.8	15.0	6.0	15.6	6.5	16.4	6.9	16.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	ERMI	2.5	0.0	5.1	0.0	5.3	0.0	5.5	9.7	5.6	10.2	5.9	11.0	6.1	12.0	6.5	12.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	FRAT	0.0	0.0	5.7	11.5	5.8	12.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	KOCR	3.0	0.0	3.5	0.0	4.0	9.0	5.0	12.1	6.0	15.0	6.2	16.0	6.4	16.8	6.9	16.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	LOSI	3.2	10.0	5.2	11.9	5.4	13.2	6.5	16.3	6.8	16.8	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	MELO	0.0	0.0	5.9	12.1	5.9	12.6	6.2	13.2	6.6	15.9	6.9	16.7	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	MUOI	0.0	0.0	0.0	0.0	4.5	12.2	5.1	13.4	6.5	16.6	6.7	16.8	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	OPPO	1.0	0.0	2.0	0.0	2.3	0.0	2.5	0.0	4.0	9.8	4.3	12.1	5.0	14.1	5.8	14.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	ORFA	0.0	0.0	0.0	0.0	0.0	0.0	5.1	9.5	5.6	12.8	6.0	13.0	6.2	15.1	6.5	16.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	ORHY	3.8	0.0	4.9	0.0	5.3	9.0	6.1	14.0	6.3	14.8	6.4	16.5	6.6	16.9	6.9	16.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
33	PELA	3.0	0.0	3.8	11.3	4.2	12.9	5.8	12.9	6.1	15.0	6.8	18.0	6.9	0.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34	PHHO	2.8	0.0	3.9	11.2	4.1	12.8	4.9	13.0	5.9	15.3	6.5	16.2	8.0	16.7	7.3	16.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35	PHMU	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36	PHLO	2.4	0.0	5.6	11.0	5.7	11.3	5.9	11.8	6.2	15.9	8.0	16.7	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37	POAM	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	POFE	4.1	0.0	5.5	9.9	5.7	10.2	5.9	11.2	6.1	16.4	6.3	16.7	6.5	18.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39	POSE	4.0	0.0	5.3	9.5	5.5	9.9	5.8	10.6	6.4	16.0	8.0	16.4	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40	SEIN	3.0	0.0	5.1	11.2	5.2	11.8	5.4	12.0	6.2	15.8	6.3	16.1	6.7	16.7	6.9	16.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41	SIAL	0.0	0.0	0.0	0.0	5.1	11.8	6.5	16.5	6.9	16.9	6.9	16.9	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42	SILI	0.0	0.0	0.0	0.0	0.0	0.0	6.4	12.8	6.5	16.0	6.5	16.2	6.6	16.7	6.9	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	SIHY	3.0	0.0	4.0	0.0	4.5	0.0	5.7	11.0	6.1	14.8	6.1	15.0	6.4	16.4	6.9	16.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44	STCO	3.1	0.0	3.8	0.0	4.4	0.0	5.7	14.0	6.2	16.0	6.4	16.7	6.6	18.0	6.8	16.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45	SYOC	0.0	0.0	5.1	0.0	5.2	0.0	5.3	0.0	5.6	0.0	6.0	0.0	6.1	0.0	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
46	TAOF	2.0	0.0	3.8	10.0	4.1	10.9	4.4	11.0	5.6	13.5	5.7	16.7	5.9	18.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47	TECA	2.0	0.0	5.0	0.0	5.2	0.0	5.5	0.0	5.7	0.0	5.8	10.1	6.0	13.0	6.2	16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48	TRDU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.2	16.7	6.3	18.0	6.6	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	TRGY	3.2	0.0	5.2	10.0	5.6	12.0	5.8	12.4	6.2	14.8	6.3	16.0	6.6	18.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	VINU	0.0	0.0	5.8	11.0	5.8	13.0	6.0	13.6	6.6	16.3	6.8	16.7	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	ZIPA	3.3	0.0	5.0	0.0	5.2	11.3	5.5	11.4	6.4	16.0	6.8	16.7	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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PHENOLOGICAL INVENTORY      STUDY AREA DEMER              1982     TYPE SITE  ARTR-AGSM-AGSP
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                   29 APRI   18 MAY    2 JUNE    14 JUNE   29 JUNE   10 JULY   25 JULY   9 AUG     18 SEPT   16 OCT
      SPECIES      VEG REPR  VEG REPR  VEG REPR  VEG REPR  VEG REPR  VEG REPR  VEG REPR  VEG REPR  VEG REPR  VEG REPR  VEG REPR  VER REPR
****************************************************************************************************************************************


   1  AGSM         4.3  0.0  4.5  0.0  4.5  0.0  0.0  0.0  5.1  0.0  5.9  0.0  6.3  0.0  6.3  0.0  6.7  0.0  7.1  0.0  0.0  0.0  0.0  0.0
   2  AGSP         3.4  0.0  3.5  0.0  5.2  9.3  0.0  0.0  5.8 13.4  6.1 15.9  6.2 16.0  6.4 16.5  6.7 18.0  7.0  0.0  0.0  0.0  0.0  0.0
   3  ALTE         4.1  0.0  4.6  0.0  5.3 10.2  0.0  0.0  6.0 15.0  6.2 16.0  6.4 16.3  6.7 16.9  8.0 18.0  0.0  0.0  0.0  0.0  0.0  0.0
   4  ARTR         3.2  0.0  3.3  0.0  3.5  9.0  0.0  0.0  4.0  9.3  4.0  9.4  4.1  9.5  4.4  9.7  5.1 10.0  5.6 12.7  0.0  0.0  0.0  0.0
   5  ASMI         3.1  0.0  4.2  9.2  4.5 10.2  0.0  0.0  5.2 13.0  5.6 15.4  5.9 15.9  6.3 16.5  6.9 16.9  8.0 18.0  0.0  0.0  0.0  0.0
   6  BUGR         4.1  0.0  4.5  0.0  5.0  9.0  0.0  0.0  5.6  9.9  5.7 11.0  5.7 12.0  6.1 16.0  6.5 16.4  7.5 16.9  0.0  0.0  0.0  0.0
   7  BRTE         4.0  0.0  4.3  0.0  5.4 10.0  0.0  0.0  6.0 11.5  6.3 15.0  6.7 15.8  8.0 16.8  0.0 16.9  0.0  0.0  0.0  0.0  0.0  0.0
   8  CANU         4.1  0.0  4.3  9.0  4.5  9.5  0.0  0.0  5.7 12.5  5.9 15.0  6.0 15.4  6.3 16.3  6.9 18.0  8.0  0.0  0.0  0.0  0.0  0.0
   9  CAAN         3.8 10.0  4.3 10.5  4.7 11.2  0.0  0.0  5.6 11.8  6.0 14.3  6.2 15.1  8.0 16.6  0.0 16.9  0.0 18.0  0.0  0.0  0.0  0.0
  10  CHNA         4.0  0.0  4.3  0.0  4.5  0.0  0.0  0.0  5.1  0.0  5.4  5.6  5.8  9.8  5.9 11.7  6.2 14.7  0.0  0.0  0.0  0.0  0.0  0.0
  11  CYMO         4.5  0.0  4.8  0.0  5.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
  12  OEPI         3.9  9.5  4.7 11.0  5.1 12.2  0.0  0.0  6.2 14.8  6.8 15.4  8.0 16.7  0.0 18.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
  13  ERPU         0.0  0.0  4.1  0.0  4.4 10.4  0.0  0.0  5.1 12.5  5.5 12.9  5.7 13.4  6.3 18.0  6.5  0.0  6.9  0.0  0.0  0.0  0.0  0.0
  14  KOCR         4.4  0.0  4.6  0.0  5.1  9.3  0.0  0.0  6.2 16.3  6.4 16.9  6.9 18.0  8.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
  15  LARE         4.0  9.1  4.6 11.2  4.8 11.5  0.0  0.0  6.2 15.2  6.2 15.0  6.7 15.6  8.0 18.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
  16  LEDE         3.9  0.0  4.4  0.0  4.6  9.7  0.0  0.0  6.1 13.3  6.6 15.8  8.0 15.8  0.0 18.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
  17  LOOR         4.1  0.0  4.4  0.0  4.7 10.8  0.0  0.0  6.5 16.0  8.0 18.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
  18  LUPU         4.0  0.0  4.6  0.0  5.0  0.0  0.0  0.0  5.6  0.0  5.8  0.0  5.9  0.0  6.1  0.0  6.4  0.0  6.8  0.0  0.0  0.0  0.0  0.0
  19  MACA         3.1  0.0  3.9  9.7  4.2 10.3  0.0  0.0  5.0 12.0  5.4 12.7  5.5 13.0  6.0 16.5  6.5 18.0  6.9  0.0  0.0  0.0  0.0  0.0
  20  OPPO         3.5  0.0  3.7  0.0  4.0  9.2  0.0  0.0  4.7 12.5  5.0 14.4  5.3 15.5  5.6 15.8  5.7 16.1  6.0 16.7  0.0  0.0  0.0  0.0
  21  ORHY         4.6  0.0  4.8  0.0  5.1  0.0  0.0  0.0  5.6 10.7  6.0 14.2  6.3 15.0  6.4 16.7  6.6 16.9  7.3 18.0  0.0  0.0  0.0  0.0
  22  PHHO         4.7 10.3  4.7 12.0  5.0 12.5  0.0  0.0  6.0 15.9  6.3 16.1  6.8 18.0  6.9  0.0  6.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
  23  PLPA         0.0  0.0  3.2  0.0  3.4  0.0  0.0  0.0  6.0 14.5  6.4 16.0  6.8 16.5  8.0 18.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
  24  POSE         4.5  0.0  4.7  9.3  5.2 10.2  0.0  0.0  6.1 16.0  6.6 16.5  8.0 18.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
  25  SAI8         0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  5.8 14.5  6.4 18.0  0.0  0.0  0.0  0.0
  26  SIAL         3.9  0.0  4.2 10.0  4.5 12.1  0.0  0.0  6.1 15.0  6.2 15.4  6.2 15.8  6.2 15.9  6.7 16.0  8.0 16.9  0.0  0.0  0.0  0.0
  27  SIHY         4.3  0.0  4.6  0.0  4.9  9.4  0.0  0.0  5.9 14.0  6.0 15.2  6.1 15.9  6.3 16.4  6.5 16.7  7.2 18.0  0.0  0.0  0.0  0.0
  28  SPCO         4.5  0.0  4.7  0.0  5.0  0.0  0.0  0.0  5.6  0.0  5.7  0.0  5.9  0.0  6.1  0.0  6.2  0.0  6.4  0.0  0.0  0.0  0.0  0.0
  29  SPCR         0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  5.5  9.8  6.0 13.5  6.3 16.5  6.5 16.9  8.0 18.0  0.0  0.0  0.0  0.0
  30  STCO         4.3  0.0  4.7  0.0  5.2  9.3  0.0  0.0  5.7 14.5  6.0 16.3  6.2 16.7  6.4 16.9  6.6 16.9  7.2 18.0  0.0  0.0  0.0  0.0
  31  TAOF         3.9  0.0  4.3  0.0  4.7 11.4  0.0  0.0  6.1 15.9  6.3 16.5  6.4 16.8  6.9 18.0  8.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
  32  TRDU         0.0  0.0  4.2  0.0  4.5  9.2  0.0  0.0  5.1 13.1  6.0 15.5  6.1 15.9  8.0 18.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
  33  VUOC         0.0  0.0  3.2  0.0  4.6  9.4  0.0  0.0  6.2 14.0  8.0 16.7  0.0 18.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
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PHENOLOGICAL INVENTORY   STUDY AREA FARSON   1982   TYPE SITE ARTR-AGSM

		30 APRI		19 MAY		3 JUNE		15 JUNE		30 JUNE		10 JULY		28 JULY		9 AUG		10 SEPT							
	SPECIES	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VER	REPR
1	AGSM	3.1	0.0	4.5	0.0	4.5	0.0	4.5	0.0	6.0	12.0	6.4	0.0	6.6	16.5	6.6	16.8	6.9	16.9	0.0	0.0	0.0	0.0	0.0	0.0
2	ALIE	0.0	0.0	0.0	0.0	0.0	0.0	5.2	12.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	ARHO	3.0	0.0	3.2	9.1	3.8	9.5	4.2	11.4	5.0	12.0	6.0	14.8	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	ARHO2	0.0	0.0	0.0	0.0	5.5	10.5	5.6	12.8	6.0	13.2	6.4	15.2	6.8	18.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	ARTR	2.3	0.0	3.2	0.0	3.3	0.0	3.4	9.0	3.5	9.2	3.6	9.5	4.1	9.6	4.8	9.7	4.8	10.0	0.0	0.0	0.0	0.0	0.0	0.0
6	ASPU	3.2	0.0	3.5	0.0	5.0	13.0	5.4	13.3	6.0	15.0	6.5	15.6	6.7	18.0	6.9	0.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	ASSP	3.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	0.0	0.0	0.0	6.7	0.0	6.9	16.9	0.0	0.0	0.0	0.0	0.0	0.0
8	ATCO	3.0	0.0	3.4	0.0	5.1	0.0	5.1	9.4	5.4	9.5	5.6	13.0	6.0	16.7	6.4	18.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	CAEL	3.0	0.0	3.7	0.0	5.0	12.8	5.6	13.4	6.1	13.9	6.3	15.0	6.4	16.5	6.7	18.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	CAFI	3.0	0.0	0.0	0.0	0.0	0.0	5.4	12.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9	16.9	0.0	0.0	0.0	0.0	0.0	0.0
11	CELA	2.8	0.0	3.0	0.0	3.4	0.0	3.8	9.1	4.0	0.0	4.9	9.5	5.4	0.0	5.9	0.0	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	CHVI	3.0	0.0	3.5	0.0	4.6	0.0	5.0	0.0	5.1	9.5	5.4	10.0	6.0	12.5	6.4	12.9	6.9	16.9	0.0	0.0	0.0	0.0	0.0	0.0
13	DEPI	0.0	0.0	4.0	0.0	5.6	11.0	5.7	12.8	6.0	16.0	6.7	16.8	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	ERCE	3.1	0.0	3.4	0.0	3.9	9.5	4.8	12.0	5.0	12.0	5.2	12.1	5.7	12.3	6.0	15.1	6.9	16.3	0.0	0.0	0.0	0.0	0.0	0.0
15	EROV	3.0	0.0	3.2	9.0	4.9	9.8	5.1	11.3	6.0	12.0	6.2	15.0	6.5	16.6	6.8	16.9	6.9	16.9	0.0	0.0	0.0	0.0	0.0	0.0
16	GRSP	2.3	0.0	2.7	0.0	4.9	9.8	5.2	10.0	5.3	13.0	5.6	14.0	6.4	16.8	6.7	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	HAAC	3.0	0.0	3.3	0.0	4.0	0.0	4.6	0.0	5.1	13.2	5.8	14.8	6.1	15.8	6.4	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	KOCR	3.2	0.0	3.7	0.0	5.0	0.0	5.3	9.6	5.7	12.4	6.0	14.8	6.2	15.8	6.4	16.6	6.9	16.9	0.0	0.0	0.0	0.0	0.0	0.0
19	LEPU	0.0	0.0	3.3	0.0	3.9	0.0	4.9	0.0	6.0	0.0	6.4	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	LOOR	3.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	MACA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	CPFR	2.0	0.0	2.3	0.0	3.0	0.0	3.9	0.0	4.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	OPPO	2.3	0.0	2.5	0.0	2.6	9.5	3.4	9.7	3.6	9.8	4.0	11.1	4.2	13.3	5.0	14.9	5.8	16.0	0.0	0.0	0.0	0.0	0.0	0.0
24	ORHY	3.5	0.0	3.9	0.0	5.0	0.0	5.4	9.5	6.0	13.0	6.3	15.5	6.5	16.6	6.7	16.9	6.9	16.9	0.0	0.0	0.0	0.0	0.0	0.0
25	PECL	3.4	0.0	3.7	10.3	5.6	11.0	5.7	13.1	5.8	13.2	5.9	15.7	6.2	15.9	6.3	16.8	6.5	16.9	0.0	0.0	0.0	0.0	0.0	0.0
26	PHHO	3.3	10.0	3.6	10.8	3.9	12.4	4.8	14.0	6.3	15.0	6.5	15.6	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	POSE	3.6	0.0	4.1	0.0	5.0	10.5	5.4	11.5	6.0	12.1	6.6	15.4	6.8	16.5	6.9	18.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	SIAL	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	SIHY	3.8	0.0	4.2	0.0	5.0	0.0	5.3	9.1	6.0	11.0	6.3	14.5	6.6	18.0	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	SILI	0.0	0.0	0.0	0.0	5.6	10.5	5.7	12.6	6.0	13.7	6.2	15.8	6.8	16.7	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	SPCO	3.0	0.0	3.3	0.0	5.3	0.0	5.4	11.0	5.8	11.5	5.9	14.0	6.0	15.0	6.3	16.0	6.9	16.9	0.0	0.0	0.0	0.0	0.0	0.0
32	STCO	3.2	0.0	3.5	0.0	5.2	0.0	5.5	9.2	6.0	12.3	6.3	15.0	6.5	18.0	6.7	0.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
33	TESP	2.4	0.0	3.0	0.0	3.7	0.0	4.2	0.0	6.0	0.0	6.3	0.0	6.5	0.0	6.9	0.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0

PHENOLOGICAL INVENTORY   STUDY AREA HORSE CK   1982   TYPE SITE ARTR-AGSM-ARNO-AGSP

		30 APRI		18 MAY		2 JUNE		14 JUNE		29 JUNE		9 JULY		26 JULY		9 AUG		28 AUG		17 SEPT		22 OCT			
	SPECIES	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VER	REPR
1	AGSM	4.6	0.0	4.7	0.0	4.8	0.0	0.0	0.0	5.4	10.3	6.0	11.3	6.2	15.5	6.5	16.0	6.9	16.2	6.9	16.9	7.4	18.0	0.0	0.0
2	AGSP	4.8	0.0	4.9	0.0	5.3	9.5	0.0	0.0	5.7	10.6	6.2	13.8	6.3	16.7	6.5	16.9	6.6	16.9	6.8	18.0	7.3	0.0	0.0	0.0
3	ANDI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	0.0	5.8	0.0	6.1	0.0	6.5	0.0	6.7	0.0	6.7	0.0	0.0	0.0	0.0	0.0
4	ARFE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	0.0	5.2	0.0	5.4	0.0	6.0	0.0	6.3	9.5	6.7	12.9	0.0	0.0	0.0	0.0
5	ARHO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	ARHO2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	14.5	6.6	15.0	6.8	15.8	8.0	16.9	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
7	ARNO	3.2	0.0	3.3	0.0	3.6	9.1	0.0	0.0	4.2	9.5	4.3	9.5	4.5	9.7	4.6	9.8	4.6	9.8	5.1	10.1	5.6	15.3	0.0	0.0
8	ARTR	3.3	0.0	3.3	0.0	3.6	9.1	0.0	0.0	4.1	9.4	4.4	9.5	4.7	9.6	4.7	9.7	4.9	9.7	5.2	10.2	5.5	13.2	0.0	0.0
9	ASPU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	13.8	6.5	14.5	6.8	16.0	6.8	16.5	6.9	16.7	8.0	18.0	0.0	0.0	0.0	0.0
10	BAIN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	12.9	6.0	14.0	6.3	15.4	6.5	16.0	6.6	16.3	6.6	16.5	0.0	0.0	0.0	0.0
11	BRJA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	13.0	6.2	14.5	8.0	16.1	0.0	18.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0
12	BRTE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	13.0	8.0	16.0	0.0	16.3	0.0	16.8	0.0	16.9	0.0	16.9	2.1	0.0	0.0	0.0
13	CAAN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	11.9	6.2	14.0	8.0	16.4	0.0	16.9	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
14	CANU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	12.5	6.2	13.9	6.9	14.6	8.0	16.8	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
15	CELA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	0.0	5.4	0.0	5.6	0.0	5.7	0.0	5.8	0.0	5.9	0.0	0.0	0.0	0.0	0.0
16	CHVI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	5.3	0.0	5.4	9.6	5.6	9.8	5.7	10.5	5.8	12.0	6.2	15.8	0.0	0.0
17	CIUN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	12.0	5.8	13.0	6.3	14.9	6.5	18.0	6.7	18.0	8.0	0.0	0.0	0.0	0.0	0.0
18	COPA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	13.9	5.9	15.9	6.1	16.1	6.2	18.0	6.3	0.0	6.4	0.0	0.0	0.0	0.0	0.0
19	CRBR	3.7	0.0	4.3	10.1	4.7	11.2	5.3	12.0	6.3	12.9	6.5	14.8	6.7	16.4	6.8	16.9	6.9	18.0	0.0	0.0	0.0	0.0	0.0	0.0
20	CRMO	4.3	0.0	4.7	9.2	5.0	10.1	5.5	10.8	5.9	12.9	6.1	14.5	6.5	16.2	6.7	16.8	6.9	18.0	8.0	0.0	0.0	0.0	0.0	0.0
21	CYMO	0.0	0.0	4.3	0.0	4.5	0.0	5.0	0.0	5.4	0.0	6.0	0.0	6.5	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	DEPI	4.0	9.8	4.5	11.0	5.0	12.3	5.5	12.7	6.0	14.4	6.5	15.6	8.0	16.5	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	ERPU	4.1	0.0	4.4	9.5	4.7	10.5	5.0	11.0	5.3	12.8	5.8	12.9	6.0	13.7	6.2	16.5	6.5	18.0	6.6	8.0	0.0	0.0	0.0	0.0
24	GACO	0.0	0.0	4.3	0.0	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	HAAC	4.5	10.1	4.8	10.7	5.0	10.9	5.1	11.8	5.4	12.8	5.9	13.8	6.3	16.8	6.4	18.0	6.7	0.0	6.7	0.0	0.0	0.0	0.0	0.0
26	KOCR	0.0	0.0	0.0	0.0	4.0	9.5	4.9	12.7	6.3	16.7	6.7	18.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	LARE	4.2	0.0	4.6	10.3	4.9	10.5	5.2	12.0	5.7	13.1	5.8	15.9	6.4	16.0	8.0	16.9	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
28	LIIN	0.0	0.0	0.0	0.0	4.4	10.4	4.7	11.5	5.0	12.7	5.8	15.2	5.9	16.3	6.1	18.0	6.4	0.0	6.4	0.0	0.0	0.0	0.0	0.0
29	LOOR	3.3	10.1	4.3	10.9	4.8	12.1	5.2	13.5	6.0	14.5	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	MACA	3.9	0.0	4.7	0.0	5.0	10.0	5.3	11.4	5.6	12.5	5.8	12.8	6.1	15.0	6.1	16.9	6.2	18.0	6.5	0.0	8.0	0.0	0.0	0.0
31	OPPO	2.0	0.0	2.5	0.0	3.2	9.2	3.7	10.2	4.0	11.4	4.3	12.9	5.0	14.8	5.3	15.6	5.5	15.9	5.6	16.1	6.0	0.0	0.0	0.0
32	ORHY	4.5	0.0	4.8	9.2	4.9	9.6	5.1	11.0	5.4	13.2	6.1	15.0	6.3	16.3	6.6	16.8	6.8	18.0	6.8	17.3	7.2	0.0	0.0	0.0
33	PECL	3.3	0.0	4.0	10.0	4.6	10.1	4.9	12.1	5.2	13.5	6.0	15.2	6.0	15.7	6.1	16.8	6.2	16.9	6.6	16.9	0.0	0.0	0.0	0.0
34	PHHO	4.5	10.9	4.7	12.1	5.0	12.3	5.5	12.6	5.9	14.1	6.2	16.5	6.8	18.0	6.9	0.0	6.9	0.0	8.0	0.0	7.3	0.0	0.0	0.0
35	POSE	4.9	0.0	5.1	9.4	5.4	10.4	5.7	12.0	6.2	13.2	6.8	16.0	8.0	16.8	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36	RHTR	3.3	0.0	3.5	0.0	3.9	0.0	4.3	0.0	5.2	0.0	5.3	0.0	5.6	0.0	5.8	0.0	5.8	0.0	6.0	0.0	0.0	0.0	0.0	0.0
37	SAIB	3.8	0.0	4.1	0.0	4.5	0.0	5.0	0.0	5.6	0.0	5.7	0.0	5.7	0.0	5.8	10.0	5.8	11.5	5.9	13.2	0.0	0.0	0.0	0.0
38	SIAL	4.0	0.0	4.5	11.0	5.0	12.4	5.3	13.1	6.0	14.4	6.4	15.8	8.0	16.3	0.0	16.5	0.0	16.9	0.0	18.0	0.0	0.0	0.0	0.0
39	SIHY	4.3	0.0	4.6	0.0	4.8	9.2	5.1	9.8	5.4	10.8	5.9	14.0	8.0	16.0	0.0	16.4	0.0	16.9	0.0	16.9	7.1	0.0	0.0	0.0
40	SPCO	3.5	0.0	4.0	0.0	4.5	0.0	4.7	0.0	5.1	10.5	5.7	11.7	6.0	12.8	6.1	14.0	6.1	15.8	6.1	16.1	0.0	0.0	0.0	0.0
41	STCO	4.5	0.0	4.7	0.0	5.1	0.0	5.4	9.5	5.8	10.9	6.1	15.5	6.3	16.7	6.4	16.8	6.7	16.8	6.7	16.9	7.1	0.0	0.0	0.0
42	TAOF	3.9	0.0	4.1	0.0	5.0	10.2	5.4	12.9	6.0	15.6	6.2	16.3	6.4	16.1	6.6	18.0	6.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	TUIN	0.0	0.0	3.9	0.0	4.1	0.0	4.3	0.0	5.0	0.0	5.8	0.0	6.0	0.0	6.2	0.0	6.5	0.0	6.6	0.0	0.0	0.0	0.0	0.0
44	TRDU	4.0	0.0	4.3	10.3	4.8	10.6	4.9	10.8	5.0	11.3	5.8	16.0	6.8	16.9	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45	VINU	4.8	10.5	5.0	11.1	5.1	11.5	5.1	12.1	5.3	13.0	6.1	14.6	6.3	15.8	6.4	16.1	6.4	16.6	6.4	16.9	0.0	0.0	0.0	0.0
46	XASA	3.9	0.0	4.2	0.0	4.7	0.0	5.0	0.0	5.5	0.0	5.6	0.0	5.7	0.0	5.8	0.0	5.8	10.1	5.9	12.4	6.4	0.0	0.0	0.0
47	YUGL	3.0	0.0	3.4	0.0	4.0	0.0	4.6	0.0	5.5	0.0	5.7	0.0	5.8	0.0	5.9	0.0	5.9	0.0	5.9	0.0	0.0	0.0	0.0	0.0
48	ZIVE	0.0	0.0	4.0	10.0	4.4	10.2	4.7	11.8	5.0	13.1	5.9	14.0	6.0	15.9	6.2	16.0	6.5	16.9	6.7	18.0	0.0	0.0	0.0	0.0

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PHENOLOGICAL INVENTORY       STUDY AREA MESA ANTEL        1982     TYPE SITE  ARTR-AGSM
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              30 APRI     19 MAY      2 JUNE      15 JUNE     30 JUNE     10 JULY     27 JULY     9 AUG       10 SEPT
     SPECIES   VEG REPR    VEG REPR    VEG REPR    VEG REPR    VEG REPR    VEG REPR    VEG REPR    VEG REPR    VEG REPR    VEG REPR    VEG REPR    VER REPR
******************************************************************************************************************************************************


  1  AGSM      3.6  0.0    4.3  0.0    4.6  0.0    5.3  0.0    5.5  0.0    6.3  0.0    6.3  0.0    6.4  0.0    6.7 18.0    0.0  0.0    0.0  0.0    0.0  0.0
  2  ALTE      3.0  0.0    3.3  0.0    3.8  0.0    4.3 12.1    6.0 15.4    6.9 16.8    8.0 16.9    0.0 18.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0
  3  ANDI      3.1  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0
  4  ARHO2     0.0  0.0    0.0  0.0    5.8 11.9    5.8 12.5    5.9 13.2    6.3 14.9    8.0 18.0    0.0  0.0    7.3 18.0    0.0  0.0    0.0  0.0    0.0  0.0
  5  ARTR      2.5  0.0    3.3  0.0    3.4  9.0    3.7  9.2    3.9  9.4    4.1  9.6    4.6  9.6    4.9  9.8    4.9 10.0    0.0  0.0    0.0  0.0    0.0  0.0
  6  ASDI      3.0  0.0    3.3  0.0    3.4  0.0    3.8  0.0    5.0  0.0    5.9  0.0    6.0  0.0    6.5  0.0    6.9  0.0    0.0  0.0    0.0  0.0    0.0  0.0
  7  ASSP      3.1  0.0    3.3  0.0    0.0  0.0    3.8  0.0    0.0  0.0    5.6  0.0    0.0  0.0    6.2  0.0    6.9  0.0    0.0  0.0    0.0  0.0    0.0  0.0
  8  ATGA      0.0  0.0    2.0  0.0    3.0  0.0    3.8  0.0    4.0  0.0    4.6  0.0    5.1  0.0    6.5  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0
  9  CACH      0.0  0.0    0.0  0.0    5.0  0.0    5.4  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    8.0 18.0    0.0  0.0    0.0  0.0    0.0  0.0
 10  CAEL      2.5  0.0    2.9  0.0    3.8  0.0    4.1  0.0    5.5  0.0    6.0  0.0    6.3  0.0    6.6  0.0    6.9  0.0    0.0  0.0    0.0  0.0    0.0  0.0
 11  CELA      2.8  0.0    3.0  0.0    3.5  0.0    3.9  0.0    4.3 12.2    4.7 12.8    6.0 13.1    6.1 15.2    6.3 15.5    0.0  0.0    0.0  0.0    0.0  0.0
 12  CHDO      0.0  0.0    0.0  0.0    3.1  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0
 13  CHVI      3.0  0.0    3.3  0.0    5.1  0.0    5.3  0.0    5.6  9.3    5.8 10.1    6.0 11.1    6.2 13.6    6.4 16.0    0.0  0.0    0.0  0.0    0.0  0.0
 14  COPA2     2.0  0.0    2.7  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0
 15  ERCA      3.0  0.0    3.5 10.2    3.8 11.2    4.2 11.5    5.2 12.5    6.1 15.1    6.1 16.1    6.3 16.7    6.7 18.0    0.0  0.0    0.0  0.0    0.0  0.0
 16  EROV      3.1  0.0    3.5  0.0    3.7 10.5    4.0 11.3    6.3 12.2    6.5 15.4    6.6 16.4    6.7 18.0    6.9  0.0    0.0  0.0    0.0  0.0    0.0  0.0
 17  ERPU      3.4  0.0    3.6  9.0    3.9 10.1    4.2 11.8    5.6 12.5    5.9 14.2    6.1 15.1    6.4 16.4    6.7 16.6    0.0  0.0    0.0  0.0    0.0  0.0
 18  ERCE      3.5  0.0    3.7  9.8    3.8  9.9    4.1 11.1    5.5 12.4    6.0 15.4    6.1 16.0    6.4 16.7    6.7 16.8    0.0  0.0    0.0  0.0    0.0  0.0
 19  KOCR      0.0  0.0    3.5  0.0    3.7  0.0    4.2  0.0    5.3  0.0    6.0 13.7    6.2 15.9    6.6 16.7    6.9 16.9    0.0  0.0    0.0  0.0    0.0  0.0
 20  HAAC      2.8  0.0    3.0  0.0    3.8 11.0    3.9 11.3    4.5 16.0    5.2 16.2    6.1 16.9    6.3 18.0    6.8  0.0    0.0  0.0    0.0  0.0    0.0  0.0
 21  LEPU      0.0  0.0    3.4  0.0    4.0  0.0    4.5  0.0    6.0  0.0    6.3  0.0    6.8  0.0    6.8  0.0    6.9 18.0    0.0  0.0    0.0  0.0    0.0  0.0
 22  LOOR      3.1  0.0    3.7  0.0    3.8  0.0    4.1 11.7    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0
 23  MACA      0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    6.1 11.0    6.2 11.4    6.3 12.1    6.3 12.6    0.0  0.0    0.0  0.0    0.0  0.0
 24  OPPO      2.0  0.0    2.2  0.0    2.3  9.0    3.2  9.1    3.5  9.5    4.4 12.1    4.7 12.6    5.3 15.0    5.8 16.3    0.0  0.0    0.0  0.0    0.0  0.0
 25  ORHY      3.0  0.0    3.3  0.0    3.5  0.0    3.9  9.5    5.7 14.4    5.9 14.9    6.3 16.6    6.6 16.9    6.9 16.9    0.0  0.0    0.0  0.0    0.0  0.0
 26  PELA      2.9  0.0    3.3  0.0    0.0  0.0    4.5  0.0    0.0  0.0    6.4  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0
 27  PHHO      3.4 10.0    3.7 11.0    5.5 11.9    5.6 13.0    5.9 13.5    6.2 15.3    6.7 16.5    8.0 18.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0
 28  POFE      3.5  0.0    3.9  9.0    3.9 10.3    4.8 11.0    6.2 11.7    6.5 15.7    6.6 16.5    6.7 16.9    6.9 16.9    0.0  0.0    0.0  0.0    0.0  0.0
 29  POSE      3.6  0.0    4.6  9.3    5.5 11.1    5.7 11.4    6.5 11.9    6.7 15.8    8.0 16.3    0.0 16.9    7.2 16.9    0.0  0.0    0.0  0.0    0.0  0.0
 30  SIHY      3.2  0.0    3.5  0.0    3.6  0.0    4.2  0.0    5.4 11.5    5.8 14.0    6.1 16.7    6.4 16.8    6.9 16.9    0.0  0.0    0.0  0.0    0.0  0.0
 31  SILI      0.0  0.0    3.6  0.0    5.1  9.0    5.3 11.5    5.9 15.1    6.4 16.0    6.9 16.8    8.0 18.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0
 32  SPCO      3.1  0.0    3.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0
 33  STCO      3.8  0.0    4.0  0.0    4.1  0.0    4.5  0.0    6.0 13.0    6.3 15.7    6.3 16.7    6.5 18.0    6.9 18.0    0.0  0.0    0.0  0.0    0.0  0.0
 34  TRGY      0.0  0.0    3.0  0.0    3.7  0.0    4.0  0.0    6.0  0.0    6.4  0.0    8.0 18.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0    0.0  0.0
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    PHENOLOGICAL INVENTORY       STUDY AREA OWL DRAW           1982      TYPE SITE  ARTR-AGSM-ARNO-AGSP
                                            --------------------------                ---------------
              1 MAY      17 MAY     1 JUNE     28 JUNE    11 JULY    3 AUG      10 AUG     27 AUG     16 SEPT    17 OCT
    SPECIES   VEG REPR   VEG REPR   VEG REPR   VEG REPR   VEG REPR   VEG REPR   VEG REPR   VEG REPR   VEG REPR   VEG REPR   VEG REPR   VER REPR
*********************************************************************************************************************************************


  1  ACMI     3.7  0.0   4.4  0.0   5.2  0.0   5.7  0.0   5.8  0.0   5.9  0.0   6.1  0.0   6.5  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
  2  AGGL     4.2  0.0   4.5  0.0   4.8  9.0   5.5 11.8   6.4 16.8   6.9 18.0   8.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
  3  AGSM     4.0  0.0   4.3  0.0   5.1  0.0   5.3  0.0   6.0  0.0   6.3  0.0   6.4  0.0   6.4  0.0   7.4  0.0   7.5  0.0   0.0  0.0   0.0  0.0
  4  AGSP     4.1  0.0   4.5  0.0   5.2  9.1   5.3 10.4   6.1 14.5   6.3 16.5   6.3 16.6   6.4 16.9   7.0 18.0   7.0  0.0   0.0  0.0   0.0  0.0
  5  ALTE     4.2  0.0   4.6  9.2   4.9  9.5   5.4 11.5   6.2 12.1   6.3 13.2   6.9 14.5   8.0 16.0   0.0 18.0   0.0  0.0   0.0  0.0   0.0  0.0
  6  ARHO     3.3  0.0   3.7  0.0   4.0  0.0   5.0  0.0   5.9 12.0   6.0 15.0   6.1 15.8   6.3 16.5   6.7 16.9   8.0 18.0   0.0  0.0   0.0  0.0
  7  ARHO2    3.5  0.0   3.9  0.0   4.4  9.3   5.9 14.0   6.3 15.9   6.5 16.1   8.0 18.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
  8  ANRO     2.8  0.0   3.4  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
  9  ARNO     2.9  0.0   3.3  0.0   3.3  9.1   4.0  9.3   4.2  9.5   4.3  9.6   4.4  9.8   4.5  9.8   5.1 13.4   5.4 13.4   0.0  0.0   0.0  0.0
 10  ARTR     3.2  0.0   3.3  0.0   3.5  9.1   4.0  9.3   4.2  9.5   4.4  9.6   4.5  9.7   4.6  9.8   5.1 11.2   5.4 12.5   0.0  0.0   0.0  0.0
 11  ASOR     0.0  0.0   4.1  0.0   5.0 11.3   5.3 12.9   6.0 14.8   6.2 15.7   6.2 16.2   6.5 16.5   6.9 16.9   0.0  0.0   0.0  0.0   0.0  0.0
 12  ASMI     3.6  9.3   4.0 10.1   4.4 11.5   5.3 13.2   6.0 15.6   6.2 16.1   6.2 16.1   6.6 16.5   8.0 16.9   0.0  0.0   0.0  0.0   0.0  0.0
 13  ASMI2    3.4  9.1   3.7  9.5   4.0 10.2   4.8 12.8   5.5 15.0   6.0 15.9   6.2 16.1   6.5 16.4   6.9 16.9   0.0  0.0   0.0  0.0   0.0  0.0
 14  ASPU     3.9  9.2   4.2 10.2   4.6 11.4   5.5 13.3   5.8 15.6   6.0 16.1   6.1 16.3   6.4 16.6   6.9 18.0   0.0  0.0   0.0  0.0   0.0  0.0
 15  ASST     3.6  9.4   4.0  9.8   5.0 10.5   5.6 13.0   6.2 15.5   6.3 16.0   6.3 16.1   6.5 16.3   6.9 16.8   0.0  0.0   0.0  0.0   0.0  0.0
 16  BASA     3.7 10.1   4.4 10.6   4.7 11.0   5.4 13.0   6.3 18.0   6.4  0.0   6.8  0.0   8.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 17  CACH     4.3  0.0   4.8 10.3   5.0 11.0   5.5 12.1   5.9 14.0   6.4 16.0   8.0 16.8   0.0 18.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 18  CANU     4.0  0.0   4.8  0.0   5.0  0.0   5.3 10.0   5.9 11.8   6.0 14.9   6.2 15.8   6.4 16.2   8.0 18.0   0.0  0.0   0.0  0.0   0.0  0.0
 19  CELA     4.0  0.0   4.3  0.0   4.5  0.0   5.1  0.0   5.4  0.0   5.6  0.0   5.7  0.0   5.8  0.0   5.9  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 20  CHDO     3.6  0.0   4.0  0.0   4.2  0.0   5.1  0.0   5.3  0.0   5.5  0.0   5.6  0.0   5.9  0.0   6.3  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 21  CHVI     4.0  0.0   4.9  0.0   5.0  0.0   5.3  0.0   5.6 10.5   5.8 10.6   6.0 11.1   6.1 13.7   6.3 14.5   0.0  0.0   0.0  0.0   0.0  0.0
 22  CIUN     3.1  0.0   3.7  0.0   4.0  0.0   5.0 11.5   5.5 13.3   6.1 15.9   6.5 16.3   6.7 16.9   6.9 18.0   0.0  0.0   0.0  0.0   0.0  0.0
 23  COPA     3.9  0.0   4.3  0.0   4.4  0.0   5.5  0.0   6.2  0.0   6.5  0.0   6.6  0.0   6.8  0.0   6.9  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 24  CRMO     0.0  0.0   0.0  0.0   5.1 10.2   5.9 15.0   6.2 16.7   6.4 18.0   6.6  0.0   6.9  0.0   8.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 25  CRBR     3.1  9.2   3.6  9.4   4.0  9.8   5.0 11.9   5.5 13.4   6.2 16.0   6.5 16.5   6.8 18.0   8.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 26  CYMO     4.2 10.0   4.7 10.2   4.9 10.4   5.6 13.0   6.2 15.4   6.9 18.0   8.0 18.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 27  OEPI     3.9  0.0   4.3  0.0   4.5  9.5   5.9 14.7   6.1 15.3   6.1 15.3   6.6 16.8   8.0 18.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 28  OOCO     3.9 11.8   4.3 11.9   4.8 12.4   5.7 15.4   6.2 18.0   6.4  0.0   6.5  0.0   6.5  0.0   6.8  0.0   6.9  0.0   0.0  0.0   0.0  0.0
 29  ERAS     4.3  0.0   4.5  0.0   4.8  9.5   5.5 12.0   5.6 13.0   5.8 14.5   6.0 15.4   6.2 15.8   6.7 16.4   8.0  0.0   0.0  0.0   0.0  0.0
 30  EROC     4.1  9.8   4.4 10.0   4.7 11.2   5.5 11.9   5.8 12.5   6.0 16.0   6.2 16.9   6.2 18.0   6.6  0.0   6.8  0.0   0.0  0.0   0.0  0.0
 31  ERPU     4.1 10.3   4.5 10.9   4.7 11.1   5.5 11.9   5.7 12.3   6.2 16.9   6.3 18.0   6.5  0.0   6.8  0.0   8.0  0.0   0.0  0.0   0.0  0.0
 32  GICO     0.0  0.0   0.0  0.0   5.2  9.6   5.6 11.5   6.0 13.0   6.2 14.2   6.2 14.5   6.4 15.0   6.6 16.1   6.8 18.0   0.0  0.0   0.0  0.0
 33  GRSQ     0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   6.1 16.1   6.3 16.5   6.5 18.0   6.8  0.0   8.0  0.0   7.4  0.0   0.0  0.0   0.0  0.0
 34  HAAC     3.7  0.0   4.3  0.0   4.5 10.0   5.4 12.8   5.9 16.0   6.2 18.0   6.2  0.0   6.6  0.0   6.8  0.0   6.9  0.0   0.0  0.0   0.0  0.0
 35  JUOS     3.1  0.0   3.6  0.0   3.8  0.0   4.4  0.0   5.3  0.0   5.5  0.0   5.6  0.0   5.7  0.0   5.8  0.0   6.0  0.0   0.0  0.0   0.0  0.0
 36  KOCR     4.0  0.0   4.6  0.0   4.9  9.3   5.6 10.3   5.8 14.0   6.1 16.5   6.4 16.9   6.4 18.0   6.4  0.0   7.5  0.0   0.0  0.0   0.0  0.0
 37  LARE     0.0  0.0   0.0  0.0   4.3  9.4   5.7 14.8   6.0 15.1   6.6 16.0   6.7 16.2   8.0 16.9   0.0 18.0   0.0  0.0   0.0  0.0   0.0  0.0
 38  LERE     0.0  0.0   4.5  0.0   5.3  9.7   5.9 11.9   8.0 15.4   0.0 16.9   0.0 18.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 39  LILE     0.0  0.0   0.0  0.0   4.1 13.0   4.8 14.0   5.5 15.0   5.8 15.9   6.2 16.9   6.4 18.0   6.9  0.0   8.0  0.0   0.0  0.0   0.0  0.0
 40  LOFO     4.1 10.3   4.5 10.8   4.8 11.0   6.3 14.9   6.8 18.0   8.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 41  LOOR     4.2 10.4   4.6 11.3   4.9 11.7   6.4 14.8   6.8 18.0   8.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 42  MAGR     0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0   5.7 11.5   5.9 11.6   6.0 11.7   6.2 14.4   6.8 15.0   8.0 16.9   0.0  0.0   0.0  0.0
 43  MELO     4.4 11.0   4.8 11.3   5.0 11.6   5.3 14.0   5.8 15.5   6.0 16.5   6.3 18.0   6.5  0.0   6.8  0.0   8.0  0.0   0.0  0.0   0.0  0.0
 44  MAVI     2.5  0.0   2.7  0.0   3.0  9.2   4.1 11.7   5.0 13.5   5.2 15.0   5.5 15.5   5.6 16.0   5.7 18.0   6.0  0.0   0.0  0.0   0.0  0.0
 45  OPPO     2.0  0.0   2.2  0.0   2.4  0.0   3.9  9.5   4.5 13.0   5.0 15.5   5.3 15.6   5.4 16.0   5.6 16.2   6.0 16.8   0.0  0.0   0.0  0.0
 46  ORHY     3.7  0.0   4.3  0.0   4.5  0.0   5.6 10.3   6.2 14.9   6.3 16.8   6.4 16.8   6.5 16.9   6.6 16.8   7.4  0.0   0.0  0.0   0.0  0.0
 47  OXLA     0.0  0.0   4.3  0.0   4.5  9.7   5.1 11.5   5.8 15.0   6.0 16.0   6.1 16.4   6.6 18.0   8.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 48  PECL     3.3  0.0   3.6  0.0   4.0  9.2   5.0 12.2   8.0 16.8   0.0 16.9   0.0 16.9   0.0 18.0   0.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 49  PELA     3.9  0.0   4.2 10.1   4.5 10.5   5.0 13.0   6.0 15.4   6.3 15.9   6.4 16.3   6.6 16.6   6.9 18.0   8.0  0.0   0.0  0.0   0.0  0.0
 50  PHHO     4.5 11.3   5.0 11.6   5.1 12.3   5.7 15.6   6.2 16.9   6.7 18.0   6.8  0.0   6.9  0.0   8.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 51  PHMU     4.0 10.5   4.3 10.8   4.6 11.0   5.3 14.8   5.9 15.0   6.3 16.7   6.6 18.0   6.8  0.0   8.0  0.0   0.0  0.0   0.0  0.0   0.0  0.0
 52  POFE     4.3  9.1  4.7  9.5  4.9 10.3  5.6 11.2  6.2 16.4  6.4 16.9  6.4 18.0  6.5  0.0  6.5  0.0  7.1  0.0  0.0  0.0  0.0  0.0
 53  POSE     4.8  9.4  5.0  9.6  4.7  9.8  5.5 10.9  6.0 16.6  6.9 16.9  8.0 18.0  0.0  0.0  7.1  0.0  7.3  0.0  0.0  0.0  0.0  0.0
 54  SEIN     4.5  0.0  4.7  9.6  5.0 10.8  5.8 11.6  6.1 13.7  8.0 18.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
 55  SELA     0.0  0.0  4.3  0.0  4.7 10.0  5.1 11.7  5.8 14.2  5.8 14.6  6.1 18.0  6.3  0.0  6.8  0.0  8.0  0.0  0.0  0.0  0.0  0.0
 56  SIAL     4.6  9.7  4.7  9.9  5.0 10.3  5.7 15.4  6.9 15.8  8.0 16.7  0.0 16.8  0.0 18.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
 57  SIHY     4.0  0.0  4.7  0.0  4.8  9.2  5.7 10.6  6.1 15.0  6.5 15.8  6.5 16.9  6.6 16.2  6.6 16.8  7.3 18.0  0.0  0.0  0.0  0.0
 58  SPCO     3.5  0.0  3.6  0.0  4.0  0.0  5.0  0.0  5.3  0.0  5.5  0.0  5.8  0.0  6.0  0.0  6.2  0.0  6.4  0.0  0.0  0.0  0.0  0.0
 59  STCO     3.5  0.0  4.3  0.0  4.5  0.0  5.5 10.5  6.0 14.7  6.3 16.8  6.4 16.9  6.6 18.0  6.6  0.0  7.2  0.0  0.0  0.0  0.0  0.0
 60  STVI     3.5  0.0  4.4  0.0  4.7  0.0  5.6 10.8  5.9 14.5  6.2 16.0  6.3 16.3  6.4 16.9  6.6 18.0  7.1  0.0  0.0  0.0  0.0  0.0
 61  TAOF     3.8  0.0  4.2  0.0  4.5  9.5  5.7 13.8  6.3 16.4  6.7 16.9  6.9 18.0  8.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
 62  TRDU     3.8  0.0  4.2  0.0  4.4  0.0  5.8 13.5  5.9 15.0  8.0 16.9  0.0 18.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
 63  TRGY     4.2 10.0  4.4 10.1  4.8 10.5  5.8 15.0  6.2 18.0  6.5  0.0  6.5  0.0  6.5  0.0  6.9  0.0  8.0  0.0  0.0  0.0  0.0  0.0
 64  VIAM     4.2  9.8  4.7 10.0  4.9 10.1  5.4 13.5  6.0 15.8  6.1 16.8  6.3 18.0  6.5  0.0  6.9  0.0  8.0  0.0  0.0  0.0  0.0  0.0
 65  VINU     3.8  0.0  4.3  0.0  4.5  0.0  5.6  0.0  6.1  0.0  6.2  0.0  6.2  0.0  6.3  0.0  6.5  0.0  6.9  0.0  0.0  0.0  0.0  0.0
 66  XASA     4.0  0.0  4.6  0.0  4.8  0.0  5.5  0.0  5.6  0.0  5.7  9.9  5.7  9.9  5.8 10.2  5.9 12.9  6.1 14.7  0.0  0.0  0.0  0.0
 67  ZIVE     3.5  0.0  4.8  0.0  5.0  0.0  5.6 14.0  6.0 16.2  6.3 16.8  6.4 16.9  6.6 18.0  6.9  0.0  8.0  0.0  0.0  0.0  0.0  0.0
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[illegible]

PHENOLOGICAL INVENTORY   STUDY AREA RED WASH 2   1982   TYPE SITE ARTR-AGSM-AGSP

		29 APRI		20 MAY		2 JUNE		14 JUNE		28 JUNE		11 JULY		25 JULY		8 AUG		19 SEPT							
	SPECIES	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VER	REPR
1	AGSM	2.8	0.0	3.2	0.0	4.6	0.0	4.6	0.0	5.4	10.5	6.3	0.0	6.3	0.0	6.5	0.0	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	AGSP	4.8	0.0	4.8	0.0	4.9	0.0	5.1	9.6	5.6	10.5	6.3	11.6	6.4	16.3	6.5	16.9	6.7	16.9	0.0	0.0	0.0	0.0	0.0	0.0
3	ARHO2	2.8	0.0	3.0	0.0	5.1	10.9	5.3	11.5	5.7	14.0	6.2	15.4	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	ARHO	3.0	0.0	3.2	0.0	0.0	0.0	4.7	0.0	0.0	0.0	0.0	0.0	6.4	18.0	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	ARTR	2.2	0.0	3.1	0.0	3.3	9.1	3.6	9.1	3.6	9.3	4.0	9.5	4.4	9.6	4.8	9.7	5.5	11.5	0.0	0.0	0.0	0.0	0.0	0.0
6	ASDI	2.5	0.0	2.9	0.0	3.2	0.0	3.6	10.0	5.9	14.0	6.2	16.0	6.5	16.8	6.9	18.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7	0.0
7	ASKE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	10.1	6.2	13.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	ASPU	2.8	0.0	3.1	10.2	5.1	10.3	5.3	10.9	5.6	11.2	6.0	14.5	6.5	16.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	CELA	2.0	0.0	2.8	0.0	3.2	0.0	3.8	0.0	4.5	0.0	5.4	0.0	5.9	0.0	6.0	0.0	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	CHDO	0.0	0.0	2.9	0.0	3.5	0.0	3.7	9.7	4.0	10.0	5.1	12.0	6.0	16.5	6.7	16.8	7.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
11	CHNA	2.3	0.0	2.9	0.0	3.1	0.0	3.4	0.0	3.5	0.0	4.6	0.0	4.9	9.5	5.8	12.4	6.0	16.4	0.0	0.0	0.0	0.0	0.0	0.0
12	CHVI	2.5	0.0	3.0	0.0	3.4	0.0	3.7	0.0	4.2	0.0	5.0	10.1	6.0	10.5	6.2	12.8	6.4	16.5	0.0	0.0	0.0	0.0	0.0	0.0
13	CRFL	0.0	0.0	0.0	0.0	4.9	9.5	5.1	10.0	5.3	11.0	5.6	12.7	6.0	15.4	6.8	16.4	6.1	16.7	0.0	0.0	0.0	0.0	0.0	0.0
14	CYMO	3.2	0.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	CAS	3.0	0.0	3.2	0.0	3.6	9.3	3.9	10.0	5.9	12.4	6.0	12.7	6.4	14.5	6.9	16.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	ERAS	0.0	0.0	3.9	10.8	5.1	11.2	5.3	11.7	6.0	13.0	6.3	15.2	8.0	16.8	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	ERCE	1.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	ERBR	1.0	0.0	2.0	0.0	3.0	0.0	3.4	0.0	5.1	9.5	5.6	10.4	6.1	12.1	6.4	14.4	6.2	12.4	0.0	0.0	0.0	0.0	0.0	0.0
19	EROV	3.0	0.0	3.5	0.0	5.1	9.5	5.2	10.8	5.5	11.2	6.0	15.8	6.0	15.8	6.6	16.9	6.7	18.0	0.0	0.0	0.0	0.0	0.0	0.0
20	GICO	2.5	0.0	2.7	0.0	5.0	10.7	5.2	11.0	5.4	11.4	5.8	12.6	6.7	15.8	8.0	16.8	7.5	18.0	0.0	0.0	0.0	0.0	0.0	0.0
21	GRSP	2.0	0.0	2.8	0.0	3.8	9.5	4.0	10.1	6.0	11.0	6.0	11.8	6.4	16.5	6.6	16.9	6.9	18.0	0.0	0.0	0.0	0.0	0.0	0.0
22	HAAC	3.0	0.0	3.3	0.0	3.7	10.0	3.9	11.8	6.0	12.5	6.1	15.1	6.2	16.9	6.3	18.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	KOCR	3.1	0.0	3.4	0.0	3.5	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	LEPU	0.0	0.0	3.0	0.0	3.2	0.0	3.7	10.0	5.5	11.3	5.9	12.9	6.1	18.0	6.4	0.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	MACA	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	9.5	5.8	11.5	5.9	12.0	0.0	0.0	0.0	0.0	0.0	0.0
26	MAGR	0.0	0.0	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	10.0	6.0	12.4	6.1	12.6	0.0	0.0	0.0	0.0	0.0	0.0
27	OPPO	1.0	0.0	2.0	0.0	2.1	0.0	3.0	0.0	3.1	0.0	4.3	10.5	4.6	11.5	5.2	14.6	5.7	18.0	0.0	0.0	0.0	0.0	0.0	0.0
28	MUDI	0.0	0.0	3.4	0.0	0.0	0.0	4.3	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	ORHY	3.1	0.0	3.3	0.0	3.5	0.0	4.2	0.0	5.5	12.0	6.0	14.6	6.4	16.7	6.6	18.0	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	PECL	3.3	0.0	3.5	9.1	5.0	9.9	5.2	12.0	5.5	12.4	5.9	12.9	6.0	15.8	6.1	16.4	7.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	PHHO	3.2	10.0	3.4	10.5	5.1	11.5	5.2	12.5	5.4	12.8	6.1	15.3	6.8	18.0	8.0	0.0	7.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	POSE	0.0	0.0	3.0	0.0	5.1	11.0	5.6	11.5	5.8	12.0	6.2	15.1	8.0	16.8	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
33	SILI	0.0	0.0	3.0	0.0	5.1	9.5	5.2	10.2	5.6	13.1	6.0	15.5	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34	SIHY	0.0	0.0	0.0	0.0	5.1	0.0	5.6	0.0	5.7	10.0	6.2	13.1	6.4	15.0	6.7	16.4	6.9	16.9	0.0	0.0	0.0	0.0	0.0	0.0
35	STCO	2.8	0.0	3.1	0.0	3.6	0.0	4.2	0.0	5.3	11.0	6.1	15.4	6.4	16.5	6.6	16.9	6.6	18.0	0.0	0.0	0.0	0.0	0.0	0.0
36	TECA	3.0	0.0	3.6	0.0	3.8	0.0	4.4	0.0	5.0	9.0	5.4	9.8	6.0	10.5	6.1	14.8	6.3	16.5	0.0	0.0	0.0	0.0	0.0	0.0
37	TOIN	0.0	0.0	4.0	10.0	0.0	0.0	4.8	11.3	0.0	0.0	5.7	12.6	6.0	15.5	6.4	16.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	VINU	0.0	0.0	3.3	0.0	4.1	9.2	4.9	10.9	5.9	12.0	6.3	15.4	6.3	16.7	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

PHENOLOGICAL INVENTORY STUDY AREA SHDS ANT#7 1982 TYPE SITE ARTR-AGSM

	SPECIES	29 APRI		17 MAY		1 JUNE		15 JUNE		29 JUNE		10 JULY		25 JULY		8 AUG		28 AUG		19 SEPT		15 OCT			
		VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VER	REPR
1	AGSM	2.6	0.0	3.3	0.0	3.9	0.0	4.0	10.2	4.9	10.6	5.7	12.5	6.1	16.0	6.3	16.8	6.5	16.9	7.0	16.9	7.1	16.9	0.0	0.0
2	ALTE	4.0	0.0	4.3	9.1	5.0	12.0	5.1	12.3	5.3	12.9	5.5	14.0	5.6	16.9	6.2	18.0	6.7	0.0	6.8	0.0	8.0	0.0	0.0	0.0
3	ARCO	0.0	0.0	4.0	0.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	ARHO2	4.5	11.0	4.8	11.3	5.2	12.5	5.4	13.0	5.6	14.0	5.9	15.2	6.2	15.4	6.8	16.0	8.0	16.7	0.0	16.9	7.4	0.0	0.0	0.0
5	ARTR	2.8	0.0	3.2	0.0	3.4	9.1	3.4	9.4	3.7	9.4	3.9	9.4	4.0	9.5	4.1	9.7	4.3	9.8	5.1	10.7	5.8	12.0	0.0	0.0
6	ASMI2	3.0	0.0	3.6	0.0	4.1	0.0	4.4	0.0	5.0	10.0	5.6	12.1	5.6	14.1	6.3	15.9	6.4	16.3	6.8	16.8	0.0	0.0	0.0	0.0
7	ASPU	3.2	0.0	3.8	0.0	4.4	11.1	4.5	0.0	4.9	0.0	5.4	0.0	5.6	0.0	6.2	0.0	6.3	0.0	0.0	0.0	6.9	18.0	0.0	0.0
8	BOGR	3.0	0.0	3.1	0.0	4.2	0.0	4.4	0.0	4.6	9.5	5.2	11.0	5.5	11.6	5.6	12.1	6.1	14.0	6.5	16.4	7.1	16.8	0.0	0.0
9	BRTE	4.0	0.0	4.6	0.0	4.9	10.1	5.3	11.5	5.9	12.2	6.3	15.0	6.8	16.5	8.0	16.8	0.0	16.9	0.0	16.9	2.3	18.0	0.0	0.0
10	CAFI	4.0	0.0	4.3	9.0	4.8	9.9	5.3	10.1	5.4	12.0	6.0	15.6	6.2	15.8	6.4	16.5	6.5	16.8	6.6	16.9	8.0	18.0	0.0	0.0
11	CELA	3.3	0.0	3.6	0.0	4.0	0.0	4.3	0.0	4.6	0.0	5.0	0.0	5.4	0.0	5.6	0.0	5.8	0.0	5.9	0.0	6.5	0.0	0.0	0.0
12	CHAL	0.0	0.0	3.7	0.0	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	CHVI	3.3	0.0	4.0	0.0	4.3	0.0	4.6	0.0	4.8	0.0	5.1	0.0	5.5	0.0	5.7	9.1	5.8	10.0	5.9	11.5	6.8	0.0	0.0	0.0
14	CYMO	4.0	10.2	4.4	10.8	5.0	12.7	5.6	13.8	5.9	13.8	6.7	16.9	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	DEPI	3.8	0.0	4.2	0.0	4.8	10.1	5.4	10.8	5.7	13.9	6.5	15.7	8.0	16.8	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	ERPU	3.9	0.0	4.2	0.0	4.5	9.5	5.1	10.4	5.2	11.5	5.4	12.6	5.5	13.0	5.8	16.9	5.9	18.0	6.1	0.0	6.2	0.0	0.0	0.0
17	LARE	3.7	0.0	4.0	0.0	4.6	0.0	5.0	9.5	5.8	10.3	5.9	14.4	6.1	15.4	6.8	16.5	8.0	16.9	0.0	18.0	0.0	0.0	0.0	0.0
18	LEDE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	13.1	6.3	15.5	6.9	16.2	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	LUPU	3.0	0.0	3.5	0.0	3.9	0.0	4.4	0.0	5.1	0.0	5.5	0.0	5.7	0.0	6.2	0.0	6.4	0.0	6.5	0.0	0.0	0.0	0.0	0.0
20	MACA	3.0	0.0	3.2	0.0	4.0	0.0	4.5	0.0	5.2	11.1	5.5	12.4	5.6	13.2	6.0	16.5	6.1	16.6	6.3	18.0	6.4	0.0	0.0	0.0
21	OPPO	2.0	0.0	2.3	0.0	3.1	9.0	3.6	9.5	4.0	10.8	5.0	13.0	5.2	15.3	5.4	15.6	5.5	15.8	5.6	16.0	6.5	18.0	0.0	0.0
22	ORHY	2.6	0.0	3.0	0.0	4.3	0.0	4.8	0.0	5.1	9.8	5.9	14.3	6.0	16.5	6.1	16.9	6.2	16.9	6.3	18.0	7.1	0.0	0.0	0.0
23	PHHO	4.5	10.2	5.0	12.3	5.2	13.3	5.6	14.0	5.7	14.5	5.9	15.5	6.3	18.0	6.5	0.0	6.6	0.0	6.9	0.0	7.8	0.0	0.0	0.0
24	PLPA	0.0	0.0	4.0	0.0	4.9	0.0	5.0	0.0	5.1	12.8	6.2	15.7	6.5	16.5	6.8	18.0	6.9	0.0	8.0	0.0	0.0	0.0	0.0	0.0
25	POSE	3.9	0.0	4.3	9.1	5.0	10.7	5.5	11.0	5.6	12.5	5.8	15.8	6.9	18.0	0.0	0.0	0.0	0.0	0.0	0.0	7.8	0.0	0.0	0.0
26	SIHY	3.5	0.0	4.1	0.0	5.1	0.0	5.3	0.0	5.5	0.0	5.9	0.0	5.6	9.8	6.0	10.9	6.2	11.2	6.4	16.0	6.8	18.0	0.0	0.0
27	SILI	0.0	0.0	3.6	0.0	4.2	11.8	4.5	12.1	5.0	12.8	5.8	15.0	6.2	15.5	6.9	16.9	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
28	SPCO	0.0	0.0	3.6	0.0	4.1	0.0	4.3	0.0	4.9	0.0	5.4	0.0	5.9	0.0	6.0	0.0	6.1	0.0	6.2	0.0	6.4	0.0	0.0	0.0
29	STCO	3.5	0.0	4.1	0.0	4.6	0.0	4.8	0.0	5.0	9.7	5.4	15.4	5.8	16.2	6.1	16.8	6.2	16.9	6.4	16.9	7.5	18.0	0.0	0.0
30	VUOC	0.0	0.0	4.0	0.0	4.7	9.2	5.0	9.6	5.2	9.9	8.0	16.0	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

PHENOLOGICAL INVENTORY STUOY AREA SWEETWATER 1982 TYPE SITE ARNO-ARTR-AGSM

		1 MAY		19 MAY		4 JUNE		16 JUNE		28 JUNE		10 JULY		25 JULY		8 AUG		27 AUG		10 SEPT		20 NOV			
	SPECIES	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VER	REPR
1	AGSM	3.6	0.0	4.2	0.0	4.6	0.0	5.2	0.0	5.6	0.0	6.2	0.0	6.4	0.0	6.5	0.0	6.8	0.0	6.9	16.9	8.0	18.0	0.0	0.0
2	ALTE	0.0	0.0	3.0	0.0	5.5	11.0	5.8	11.7	6.0	13.2	6.4	15.8	6.8	16.1	8.0	16.9	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
3	ARFR	3.1	0.0	3.3	0.0	4.0	0.0	4.1	0.0	5.0	9.0	5.4	9.8	5.8	9.9	5.9	10.0	6.0	10.2	0.0	0.0	0.0	0.0	0.0	0.0
4	ARHO	3.0	0.0	3.7	0.0	4.0	9.5	4.3	9.8	4.4	11.0	6.3	15.3	6.7	16.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	ARHO2	0.0	0.0	4.0	11.1	5.8	11.3	5.9	13.0	6.1	13.9	6.4	15.0	6.7	15.9	8.0	16.8	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
6	ARNO	2.0	0.0	3.2	0.0	3.3	9.2	3.5	9.3	3.5	9.4	3.6	9.5	4.1	9.5	4.6	9.7	4.6	9.6	4.7	9.9	8.0	16.9	0.0	0.0
7	ARTR	2.4	0.0	3.2	0.0	3.3	9.0	3.6	9.2	3.6	9.4	3.7	9.6	4.2	9.6	4.5	9.6	4.6	9.7	4.7	10.0	8.0	16.9	0.0	0.0
8	ASMI	3.3	0.0	3.8	0.0	5.1	10.0	5.3	11.0	5.8	11.4	6.1	15.4	6.3	16.0	6.6	16.8	6.7	18.0	8.0	0.0	0.0	0.0	0.0	0.0
9	ASMI2	3.1	0.0	3.7	0.0	4.0	0.0	4.8	10.9	5.2	11.2	6.2	15.8	6.2	16.0	6.7	16.9	6.8	18.0	8.0	0.0	0.0	0.0	0.0	0.0
10	ASPU	3.0	0.0	4.0	11.3	5.0	11.0	5.2	12.4	5.7	12.7	6.0	14.9	6.8	15.0	6.9	16.4	8.0	16.7	0.0	18.0	0.0	0.0	0.0	0.0
11	ASSP	2.8	0.0	3.0	0.0	3.9	10.8	4.9	13.4	6.0	14.7	6.8	15.3	8.0	16.2	0.0	16.7	0.0	16.9	0.0	0.0	0.0	0.0	0.0	0.0
12	CAEL	3.1	0.0	3.3	0.0	4.5	12.0	5.0	12.8	5.5	13.3	5.9	15.0	6.1	15.3	6.4	16.0	6.5	16.5	6.8	16.9	0.0	0.0	0.0	0.0
13	CELA	2.7	0.0	3.0	0.0	3.4	0.0	3.8	0.0	4.0	0.0	4.7	0.0	5.1	0.0	5.8	0.0	5.9	0.0	6.9	16.9	0.0	0.0	0.0	0.0
14	CHDO	0.0	0.0	4.0	0.0	5.2	0.0	5.3	9.8	5.1	11.0	5.9	13.7	6.1	14.7	6.4	16.0	6.5	16.3	6.9	16.9	0.0	0.0	0.0	0.0
15	CHVI	2.9	0.0	3.5	0.0	4.0	0.0	4.2	0.0	4.8	0.0	5.8	0.0	5.9	9.5	6.2	14.0	6.3	14.2	6.7	15.3	8.0	18.0	0.0	0.0
16	CHNA	3.0	0.0	3.6	0.0	4.0	0.0	4.4	0.0	4.5	0.0	5.4	0.0	5.9	9.5	6.0	11.8	6.1	12.2	6.8	13.0	8.0	0.0	0.0	0.0
17	COPA	0.0	0.0	3.8	10.0	5.3	11.0	5.5	11.5	5.9	12.0	5.9	14.8	6.0	15.0	6.3	16.1	6.3	16.5	6.9	16.9	8.0	0.0	0.0	0.0
18	CRBR	0.0	0.0	3.4	0.0	4.9	10.5	5.4	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	CRFL	0.0	0.0	3.3	0.0	5.0	10.3	5.5	11.3	5.8	11.7	5.9	12.6	6.4	14.0	6.9	16.4	8.0	16.8	8.0	16.9	0.0	0.0	0.0	0.0
20	CYMO	0.0	0.0	3.8	10.5	0.0	0.0	4.1	11.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	CAFI	3.3	0.0	3.4	9.6	5.0	12.0	5.3	12.8	5.8	13.0	6.2	15.3	6.3	16.0	6.6	16.8	6.7	16.9	6.9	16.9	0.0	0.0	0.0	0.0
22	DEGE	0.0	0.0	0.0	0.0	0.0	0.0	4.6	11.4	5.0	11.6	6.6	12.8	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	DEPI	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	ERCE	0.0	0.0	3.7	0.0	4.0	10.2	4.3	11.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	EROV	3.0	0.0	3.4	0.0	4.0	10.2	4.3	11.3	5.9	12.0	6.1	14.5	6.3	15.5	6.4	16.0	6.6	16.4	6.9	16.9	0.0	0.0	0.0	0.0
26	ERPU	3.1	0.0	3.0	0.0	3.6	10.8	4.0	11.6	4.8	12.8	6.2	15.0	6.8	18.0	6.9	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	GICO	3.0	9.2	3.7	9.6	4.0	10.1	4.3	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	HAAC	3.2	0.0	3.6	0.0	5.0	11.0	5.3	12.7	5.5	13.9	5.7	15.4	6.0	16.0	6.2	16.8	6.5	18.0	8.0	18.0	0.0	0.0	0.0	0.0
29	KOCR	3.4	0.0	3.7	0.0	4.9	10.4	5.2	10.5	5.5	11.5	5.9	13.6	6.0	15.8	6.4	16.5	6.5	16.9	6.8	16.9	0.0	0.0	0.0	0.0
30	LARE	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	LELU	0.0	0.0	2.8	0.0	5.0	10.5	5.3	11.2	5.5	12.0	6.3	14.7	6.7	15.8	8.0	16.4	0.0	16.9	0.0	16.9	0.0	0.0	0.0	0.0
32	LEPU	0.0	0.0	3.4	0.0	5.1	9.5	5.3	11.6	5.5	12.2	5.8	13.9	6.0	15.1	6.4	16.2	6.8	16.9	6.9	16.9	0.0	0.0	0.0	0.0
33	LERE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	12.0	6.1	14.5	0.0	0.0	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34	LIRU	0.0	0.0	3.9	0.0	5.8	10.5	5.8	11.0	5.9	12.5	6.2	15.0	6.4	15.1	6.6	16.1	6.8	16.4	6.9	16.9	0.0	0.0	0.0	0.0
35	MACA	3.4	0.0	3.6	0.0	5.1	0.0	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36	MAGR	3.0	0.0	3.7	0.0	5.1	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37	OEAL	0.0	0.0	5.3	0.0	5.7	9.5	5.8	10.0	6.0	10.0	6.4	14.3	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	OPPO	2.0	0.0	2.8	0.0	2.9	9.5	3.1	9.7	3.3	9.9	4.0	11.4	4.1	12.0	4.6	14.9	5.0	15.1	5.6	16.0	0.0	0.0	0.0	0.0
39	ORHY	3.5	0.0	3.7	0.0	5.0	0.0	5.2	9.6	5.5	10.8	6.0	14.2	6.1	16.1	6.4	16.8	6.5	18.0	6.9	18.0	0.0	0.0	0.0	0.0
40	OXLA	0.0	0.0	0.0	0.0	0.0	0.0	4.0	9.7	0.0	0.0	5.7	13.3	0.0	0.0	6.7	16.4	6.9	16.7	6.9	16.9	0.0	0.0	0.0	0.0
41	PEFR	3.0	0.0	3.8	10.0	4.0	10.0	4.5	12.7	5.1	13.7	5.9	15.0	6.0	15.8	6.2	16.1	6.4	16.8	6.8	16.9	0.0	0.0	0.0	0.0
42	PHHO	3.4	10.1	4.0	11.7	3.9	12.3	4.2	13.0	4.8	13.3	6.0	16.0	6.1	16.1	6.4	18.0	6.8	0.0	0.0	0.0	7.8	0.0	0.0	0.0
43	POSE	3.3	0.0	4.0	9.0	5.8	11.0	5.8	11.5	6.3	13.8	6.6	15.5	6.8	16.0	8.0	16.8	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
44	PSTE	3.0	0.0	3.8	0.0	5.0	0.0	5.2	0.0	5.9	12.0	6.4	15.0	6.8	15.5	8.0	16.4	0.0	16.7	0.0	16.9	0.0	0.0	0.0	0.0
45	SIHY	3.3	0.0	3.5	0.0	0.0	4.5	0.0	0.0	6.0	13.0	0.0	0.0	6.5	16.0	6.6	16.5	6.9	16.9	0.0	0.0	0.0	0.0	0.0	0.0
46	SPCO	3.0	0.0	4.2	0.0	5.1	9.0	5.3	10.5	5.6	11.9	5.9	13.0	6.1	14.8	6.3	16.2	6.3	16.5	6.6	16.8	0.0	0.0	0.0	0.0
47	STCO	3.3	0.0	3.9	0.0	4.0	0.0	4.7	0.0	5.1	10.6	6.0	13.2	6.2	15.8	6.4	16.9	6.5	16.9	6.7	16.9	8.0	18.0	0.0	0.0
48	TECA	2.2	0.0	3.4	0.0	4.0	0.0	4.2	0.0	5.0	0.0	5.6	0.0	6.0	10.0	6.2	12.4	6.8	13.2	6.9	16.2	0.0	0.0	0.0	0.0
49	TOIN	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	18.0	0.0	0.0
50	TRGY	0.0	0.0	0.0	0.0	4.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	VINU	3.3	0.0	3.9	10.5	5.8	11.2	5.8	12.5	5.9	15.0	6.4	15.5	6.7	16.0	8.0	16.7	0.0	16.9	0.0	18.0	0.0	0.0	0.0	0.0
52	XASA	3.0	0.0	3.3	0.0	4.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	***	0.0	0.0	0.0
53	ZIVE	3.5	0.0	4.3	9.2	5.6	11.0	5.7	12.1	6.1	13.0	6.6	14.8	6.9	16.8	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

PHENOLOGICAL INVENTORY   STUDY AREA UP GOV'T   1982   TYPE SITE   ARTR-AGSM

		29 APRI		19 MAY		30 MAY		13 JUNE		28 JUNE		11 JULY		25 JULY		10 AUG		27 AUG		20 NOV					
	SPECIES	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VER	REPR
1	AGSM	2.7	0.0	3.0	0.0	4.0	0.0	4.1	0.0	4.7	0.0	6.0	0.0	6.2	0.0	6.6	0.0	8.0	0.0	7.8	0.0	0.0	0.0	0.0	0.0
2	ALTE	4.2	0.0	4.3	9.2	4.5	9.8	4.7	12.0	4.9	13.5	5.4	15.0	6.0	16.5	6.9	18.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	ANDI	0.0	0.0	4.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	ARHO2	3.1	0.0	3.8	9.5	4.0	9.9	4.4	11.9	5.0	13.0	5.8	15.0	6.2	15.4	6.4	16.0	6.7	16.5	0.0	0.0	0.0	0.0	0.0	0.0
5	ARTR	2.9	0.0	3.2	0.0	3.3	9.0	3.4	9.3	3.8	9.3	3.9	9.4	4.0	9.5	4.1	9.7	4.4	9.8	7.9	16.7	0.0	0.0	0.0	0.0
6	ASPU	4.1	0.0	4.3	9.3	4.7	10.6	5.0	11.3	5.3	12.5	5.7	14.3	5.8	15.3	6.0	16.0	6.5	16.5	0.0	0.0	0.0	0.0	0.0	0.0
7	BOGR	3.0	0.0	3.3	0.0	3.6	0.0	3.9	0.0	4.3	9.8	4.9	10.9	5.1	11.6	5.9	13.5	6.0	14.4	0.0	0.0	0.0	0.0	0.0	0.0
8	BRTE	3.9	0.0	4.4	9.4	4.6	9.8	5.0	10.2	5.5	11.8	6.0	13.9	6.9	16.0	8.0	16.8	0.0	16.9	0.0	0.0	0.0	0.0	0.0	0.0
9	CANU	3.0	0.0	4.0	9.0	4.7	9.5	5.0	10.0	5.4	10.8	5.8	14.0	5.9	15.2	6.2	16.5	6.4	16.9	0.0	0.0	0.0	0.0	0.0	0.0
10	CALI	4.3	9.5	4.8	10.1	5.0	11.0	5.4	11.5	5.6	11.7	5.9	13.9	6.0	14.8	8.0	16.5	0.0	16.7	0.0	0.0	0.0	0.0	0.0	0.0
11	CHV1	0.0	0.0	3.9	0.0	4.4	0.0	5.3	0.0	5.4	0.0	5.5	9.7	5.6	9.8	5.6	10.3	5.8	13.1	0.0	0.0	0.0	0.0	0.0	0.0
12	CRMO	3.7	0.0	4.0	0.0	4.3	9.3	5.0	11.8	5.3	13.9	5.8	14.3	5.9	16.5	6.7	18.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	CYMO	3.0	0.0	3.7	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	COL1	3.6	0.0	3.9	9.2	4.1	9.5	5.0	12.1	5.6	13.0	6.0	14.5	6.3	15.9	6.9	16.5	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
15	DEP1	3.7	0.0	4.1	9.6	4.3	10.2	4.9	12.2	5.3	13.8	6.1	15.0	6.8	15.9	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	ERPU	0.0	0.0	4.2	9.1	4.5	10.3	5.0	10.5	5.2	11.2	5.4	12.8	5.7	16.9	6.2	18.0	6.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	GACO	0.0	0.0	4.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	HAAC	4.1	0.0	4.5	0.0	4.7	9.2	5.4	0.0	5.6	0.0	5.9	0.0	6.2	0.0	6.3	0.0	6.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	KOCR	3.6	0.0	3.8	0.0	4.3	0.0	4.6	10.1	5.1	11.7	6.2	15.4	6.3	16.8	6.5	16.9	6.9	18.0	7.8	0.0	0.0	0.0	0.0	0.0
20	LARE	0.0	0.0	4.5	0.0	4.7	0.0	5.0	0.0	5.4	12.0	5.9	13.0	6.2	15.5	8.0	16.5	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
21	LERE	0.0	0.0	4.0	0.0	4.2	9.4	5.9	9.6	6.0	10.8	8.0	15.4	0.0	16.5	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	LEPU	0.0	0.0	4.1	9.2	4.4	9.4	5.0	12.1	5.6	13.0	6.0	15.8	6.8	18.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	LOFO	0.0	0.0	4.5	10.3	4.7	11.0	5.2	13.3	5.9	14.5	6.9	16.5	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	MACA	3.6	0.0	3.9	0.0	4.2	9.1	5.8	10.0	5.8	11.0	5.8	12.0	6.3	15.0	6.5	16.5	6.7	16.9	0.0	0.0	0.0	0.0	0.0	0.0
25	MUD1	4.5	0.0	4.6	.2	4.7	.8	6.0	5.2	6.2	6.0	8.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	OPPO	2.1	0.0	2.5	0.0	2.7	9.3	2.9	9.4	3.2	9.6	3.8	11.5	4.4	15.0	5.2	15.6	5.3	15.7	7.0	0.0	0.0	0.0	0.0	0.0
27	PECL	3.7	0.0	3.9	0.0	4.2	0.0	4.4	0.0	4.9	0.0	5.5	0.0	5.6	0.0	6.3	0.0	6.9	0.0	7.2	0.0	0.0	0.0	0.0	0.0
28	PHHO	4.3	10.3	5.0	11.9	5.2	12.4	5.6	12.9	5.7	14.2	5.9	15.5	6.4	16.9	6.7	16.8	6.8	0.0	7.5	0.0	0.0	0.0	0.0	0.0
29	PLPA	0.0	0.0	4.1	0.0	4.3	0.0	4.7	0.0	5.0	10.2	5.7	13.5	6.5	16.8	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	POSE	4.0	0.0	4.2	0.0	4.6	0.0	5.0	0.0	5.2	0.0	5.9	0.0	6.8	0.0	8.0	0.0	0.0	0.0	7.8	0.0	0.0	0.0	0.0	0.0
31	SPCO	3.4	0.0	4.1	0.0	4.4	9.3	5.0	0.0	5.1	0.0	5.2	0.0	5.5	0.0	5.9	0.0	5.9	0.0	7.1	0.0	0.0	0.0	0.0	0.0
32	STCO	0.0	0.0	3.6	0.0	4.2	0.0	4.6	9.8	5.0	10.5	5.4	14.5	5.9	16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
33	TROU	3.5	0.0	3.8	0.0	4.1	0.0	5.0	10.5	5.6	14.0	6.0	15.5	6.2	16.8	8.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34	VIAM	0.0	0.0	4.3	9.1	4.5	9.9	5.2	12.0	5.4	13.1	5.4	14.0	6.2	16.1	6.3	16.5	6.8	16.9	0.0	0.0	0.0	0.0	0.0	0.0
35	V1NU	3.2	0.0	3.9	0.0	4.2	0.0	4.6	0.0	5.0	0.0	5.4	0.0	5.5	0.0	5.7	0.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36	XASA	3.8	0.0	4.0	0.0	4.2	0.0	4.5	0.0	4.8	0.0	5.0	0.0	5.3	0.0	5.5	0.0	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TABLE IV. Prime species intensive phenological inventory for 1982 by exclosure, plant species, and date collection date for each permanently identified plant. Intra-tabular tables of contents and check list of contents and check list of sampling times.

	Sampling Time											Page
	1	2	3	4	5	6	7	8	9	10	10b	
Agropyron smithii												
Bud Kimball Exc.	X	X	X		X	X	X	X	X			62
Cumberland #3 Exc.	X		X	X	X	X	X	X				70
Demer Exc.	X	X	X		X	X	X	X				77
Farson Exc.	X	X	X	X	X	X	X	X				84
Horse Creek Exc.	X	X	X		X	X	X	X	X			92
Mesa Antelope Exc.	X	X	X	X	X	X	X	X				100
Owl Draw Exc.	X	X	X		X	X		X	X			108
Red Wash # 2 Exc.	X	X	X	X	X	X	X	X				115
Shoshoni # 7 Exc.	X	X	X	X	X	X	X	X	X			123
Sweetwater Exc.	X	X	X	X	X	X	X	X	X			132
Upper Gov't Draw Exc.	X	X	X	X	X	X	X	X	X			141
Agropyron spicatum												
Bud Kimball	X	X	X		X	X	X	X	X			150
Cedar Mountain Exc.	X	X	X	X	X	X	X	X				158
Cumberland # 3 Exc.	X		X	X	X	X	X	X				166
Demer Exc.	X	X	X		X	X	X	X				173
Horse Creek Exc.	X	X	X		X	X	X	X	X			180
Owl Draw Exc.	X	X			X	X		X	X			188
Red Wash # 2 Exc.	X	X	X	X	X	X	X	X				195
Artemisia nova												
Horse Creek Exc.	X	X	X		X	X	X	X	X		X	203
Owl Draw Exc.	X	X	X		X	X		X	X		X	212
Sweetwater Exc.	X	X	X	X	X	X	X	X	X	X		220
Artemisia tridentata												
Bud Kimball Exc.	X	X	X		X	X	X	X	X		X	230
Cedar Mountain Exc.	X	X	X	X	X	X	X	X				239
Cumberland #3 Exc.	X		X	X	X	X	X	X		X		247
Demer Exc.	X	X	X		X	X	X	X			X	255
Farson Exc.	X	X	X	X	X	X	X	X		X		263
Horse Creek Exc.	X	X	X		X	X	X	X	X		X	272
Mesa Antelope Exc.		X	X	X	X	X	X	X		X		281
Owl Draw Exc.	X	X	X		X	X		X	X		X	289
Red Wash #2 Exc.	X	X	X	X	X	X	X	X				297
Shoshoni #7 Exc.	X	X	X	X	X	X	X	X	X		X	305
Sweetwater Exc.	X	X	X	X	X	X	X	X	X	X		315
Upper Gov't Draw Exc.	X	X	X	X	X	X	X	X	X			325

TABLE IV. (continued)

Average dates and ranges of dates for sampling periods - 1982

Sampling Period	Average Date	Range of Dates	Days Since Previous Sampling Period Date
1	April 30	April 29 - May 1	
2	May 19	May 17 - May 20	19
3	June 3	June 1 - June 3	15
4	June 15	June 13 - June 16	12
5	June 29	June 28 - June 30	14
6	July 10	July 9 - July 11	11
7	July 27	July 25 - July 28	17
8	August 9	August 8 - August 10	13
9	August 28	August 27 - August 28	19
10a*	September 11	September 10 - September 11	14
10b	September 18	September 16 - September 19	7

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* The September sampling occurred in two intervals: September 10 - 11 and September 16 - 19.

AGROPYRON SMITHII STUDY AREA BUD KIMBAL DATE 30 APRIL 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE		MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
	VEG.	REPR.					
1	4.5	0.0	0.0	15.0	0.0	0.0	0.0
2	4.5	0.0	0.0	14.5	0.0	0.0	0.0
3	3.5	0.0	0.0	10.0	0.0	0.0	0.0
4	4.5	0.0	0.0	10.5	0.0	0.0	0.0
5	3.5	0.0	0.0	12.0	0.0	0.0	0.0
6	4.3	0.0	0.0	8.0	0.0	0.0	0.0
7	3.5	0.0	0.0	9.0	0.0	0.0	0.0
8	4.5	0.0	0.0	11.0	0.0	0.0	0.0
9	5.2	0.0	0.0	10.5	0.0	0.0	0.0
10	4.5	0.0	0.0	9.2	0.0	0.0	0.0
11	3.5	0.0	0.0	8.5	0.0	0.0	0.0
12	4.7	0.0	0.0	12.5	0.0	0.0	0.0
13	4.5	0.0	0.0	10.0	0.0	0.0	0.0
14	3.9	0.0	0.0	11.0	0.0	0.0	0.0
15	4.2	0.0	0.0	9.0	0.0	0.0	0.0
16	5.1	0.0	0.0	10.5	0.0	0.0	0.0
17	4.7	0.0	0.0	10.5	0.0	0.0	0.0
18	4.6	0.0	0.0	10.0	0.0	0.0	0.0
19	4.8	0.0	0.0	13.0	0.0	0.0	0.0
20	4.5	0.0	0.0	11.0	0.0	0.0	0.0
MEAN	4.4	0.0	0.0	10.8	0.0	0.0	0.0
STD DEV	.5	0.0	0.0	1.9	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII STUDY AREA BUD KIMBAL DATE 18 MAY 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	5.3	0.0	.3	21.0	0.0	0.0	1.0
2	4.9	0.0	.4	32.0	0.0	0.0	1.0
3	5.3	0.0	.2	13.0	0.0	0.0	6.0
4	4.8	0.0	.2	18.0	0.0	0.0	1.0
5	5.3	0.0	.2	17.5	0.0	0.0	1.0
6	4.9	0.0	.2	9.0	0.0	0.0	2.0
7	4.9	0.0	.3	15.0	0.0	0.0	1.0
8	4.8	0.0	.2	12.1	0.0	0.0	1.0
9	5.4	0.0	.3	17.0	0.0	0.0	1.0
10	4.9	0.0	.4	15.0	0.0	0.0	1.0
11	4.7	0.0	.3	12.5	0.0	0.0	1.0
12	4.9	0.0	.3	13.5	0.0	0.0	1.0
13	4.9	0.0	.4	17.0	0.0	0.0	1.0
14	5.3	0.0	.4	17.0	0.0	0.0	1.0
15	3.9	0.0	.2	17.0	0.0	0.0	1.0
16	4.9	0.0	.2	8.0	0.0	0.0	1.0
17	5.9	0.0	.4	15.0	0.0	0.0	1.0
18	4.9	0.0	.3	11.0	0.0	0.0	1.0
19	3.9	0.0	.3	12.0	0.0	0.0	2.0
20	4.5	0.0	.3	18.5	0.0	0.0	3.0
MEAN	4.9	0.0	.3	15.6	0.0	0.0	1.5
STD DEV	.5	0.0	.1	5.1	0.0	0.0	1.2

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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  AGROPYRON SMITHII      STUDY AREA BUD KIMBAL          DATE 02 JUNE      1982
  --------------------              ----------               -----------------

         PLANT  PHENOLOGICAL  MAX.   MAX.   MAX.   NOS.  NOS.
          NO.   STAGE  SCORE  LEAF   LEAF   SPIKE  SPK/  VEG.
                VEG.   REPR.  WIDTH HGHT.   HGHT.  CULM  PLANT
********************************************************************************
          1    4.8    0.0     .3   21.0    0.0    0.0    0.0
          2    4.9    0.0     .3   25.0    0.0    0.0    0.0
          3    5.2    0.0     .2   13.0    0.0    0.0    0.0
          4    4.8    0.0     .2   20.0    0.0    0.0    0.0
          5    4.7    0.0     .2   19.0    0.0    0.0    0.0
          6    5.1    0.0     .2   11.0    0.0    0.0    0.0
          7    4.8    0.0     .2   16.0    0.0    0.0    0.0
          8    4.7    0.0     .2   13.0    0.0    0.0    0.0
          9    4.6    0.0     .2   12.0    0.0    0.0    0.0
         10    5.4    0.0     .4   16.5    0.0    0.0    0.0
         11    4.4    0.0     .3   11.0    0.0    0.0    0.0
         12    5.4    0.0     .4   16.0    0.0    0.0    0.0
         13    5.2    0.0     .4   18.5    0.0    0.0    0.0
         14    5.4    0.0     .5   24.0    0.0    0.0    0.0
         15    4.5    0.0     .3   10.5    0.0    0.0    0.0
         16    4.6    0.0     .3   12.0    0.0    0.0    0.0
         17    5.5    0.0     .5   18.0    0.0    0.0    0.0
         18    5.3    0.0     .4   15.5    0.0    0.0    0.0
         19    4.8    0.0     .3   16.5    0.0    0.0    0.0
         20    5.5    0.0     .4   24.0    0.0    0.0    0.0


       MEAN    5.0    0.0     .3   16.6    0.0    0.0    0.0

    STD DEV     .4    0.0     .1    4.5    0.0    0.0    0.0

    0.0 = NOT RECORDED

    MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII        STUDY AREA BUD KIMBAL          DATE 29 JUNE        1982
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       PLANT  PHENOLOGICAL  MAX.   MAX.   MAX.   NOS.  NOS.
        NO.   STAGE  SCORE  LEAF   LEAF   SPIKE  SPK/  VEG.
              VEG.   REPR.  WIDTH  HGHT.  HGHT.  CULM  PLANT
*****************************************************************************
         1    5.2    0.0     .2    20.0   0.0    0.0   0.0
         2    5.1    0.0     .3    26.0   0.0    0.0   0.0
         3    5.4    0.0     .2    12.5   0.0    0.0   0.0
         4    4.8    0.0     .2    20.0   0.0    0.0   0.0
         5    5.2    0.0     .2    19.0   0.0    0.0   0.0
         6    4.9    0.0     .2    11.5   0.0    0.0   0.0
         7    5.0    0.0     .3    21.5   0.0    0.0   0.0
         8    4.7    0.0     .1    15.5   0.0    0.0   0.0
         9    5.2    0.0     .2    13.5   0.0    0.0   0.0
        10    5.4    0.0     .4    19.0   0.0    0.0   0.0
        11    4.8    0.0     .2    10.0   0.0    0.0   0.0
        12    5.3    0.0     .3    16.0   0.0    0.0   0.0
        13    5.3    0.0     .3    18.0   0.0    0.0   0.0
        14    5.4    0.0     .4    21.0   0.0    0.0   0.0
        15    4.7    0.0     .2    10.5   0.0    0.0   0.0
        16    5.3    0.0     .3    13.0   0.0    0.0   0.0
        17    5.4    0.0     .5    19.0   0.0    0.0   0.0
        18    5.4    0.0     .3    15.0   0.0    0.0   0.0
        19    5.3    0.0     .2    16.0   0.0    0.0   0.0
        20    5.3    0.0     .2    14.0   0.0    0.0   0.0


      MEAN    5.2    0.0     .3    16.6   0.0    0.0   0.0

   STD DEV     .2    0.0     .1     4.2   0.0    0.0   0.0

   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII   STUDY AREA BUD KIMBAL   DATE 10 JULY   1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.2	0.0	.2	22.0	0.0	0.0	0.0
2	6.2	0.0	.2	32.0	0.0	0.0	0.0
3	6.2	0.0	.1	6.5	0.0	0.0	0.0
4	6.1	0.0	.2	21.0	0.0	0.0	0.0
5	6.1	0.0	.2	20.0	0.0	0.0	0.0
6	6.0	0.0	.1	11.0	0.0	0.0	0.0
7	6.2	0.0	.2	22.0	0.0	0.0	0.0
8	6.2	0.0	.1	13.0	0.0	0.0	0.0
9	6.5	0.0	.2	13.0	0.0	0.0	0.0
10	6.0	0.0	.3	19.0	0.0	0.0	0.0
11	6.3	0.0	.3	15.0	0.0	0.0	0.0
12	6.1	0.0	.3	18.0	0.0	0.0	0.0
13	6.0	0.0	.3	21.0	0.0	0.0	0.0
14	6.1	0.0	.2	17.0	0.0	0.0	0.0
15	6.1	0.0	.2	11.0	0.0	0.0	0.0
16	6.0	0.0	.2	13.0	0.0	0.0	0.0
17	6.3	0.0	.3	18.0	0.0	0.0	0.0
18	6.2	0.0	.3	16.0	0.0	0.0	0.0
19	6.1	0.0	.2	16.0	0.0	0.0	0.0
20	6.0	0.0	.3	16.0	0.0	0.0	0.0
MEAN	6.1	0.0	.2	17.0	0.0	0.0	0.0
STD DEV	.1	0.0	.1	5.4	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII STUDY AREA BUD KIMBAL DATE 26 JULY 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.3	0.0	.2	21.0	0.0	0.0	0.0
2	6.2	0.0	.2	30.0	0.0	0.0	0.0
3	6.3	0.0	.2	13.0	0.0	0.0	0.0
4	6.3	0.0	.2	23.0	0.0	0.0	0.0
5	6.3	0.0	.2	20.0	0.0	0.0	0.0
6	6.3	0.0	.1	12.0	0.0	0.0	0.0
7	6.2	0.0	.2	21.0	0.0	0.0	0.0
8	6.4	0.0	.1	13.0	0.0	0.0	0.0
9	6.4	0.0	.1	15.5	0.0	0.0	0.0
10	6.2	0.0	.2	20.0	0.0	0.0	0.0
11	6.3	0.0	.2	14.0	0.0	0.0	0.0
12	6.2	0.0	.2	17.5	0.0	0.0	0.0
13	6.3	0.0	.3	22.0	0.0	0.0	0.0
14	6.3	0.0	.3	22.0	0.0	0.0	0.0
15	6.4	0.0	.1	10.0	0.0	0.0	0.0
16	6.3	0.0	.2	12.5	0.0	0.0	0.0
17	6.3	0.0	.2	18.5	0.0	0.0	0.0
18	6.3	0.0	.2	16.0	0.0	0.0	0.0
19	6.3	0.0	.2	13.0	0.0	0.0	0.0
20	6.2	0.0	.2	24.0	0.0	0.0	0.0
MEAN	6.3	0.0	.2	17.9	0.0	0.0	0.0
STD DEV	.1	0.0	.1	5.1	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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AGROPYRON SMITHII        STUDY AREA BUD KIMBAL           DATE  9 AUGUST    1982
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           PLANT   PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.   NOS.
            NO.    STAGE  SCORE   LEAF    LEAF    SPIKE   SPK/   VEG.
                   VEG.   REPR.   WIDTH   HGHT.   HGHT.   CULM   PLANT
************************************************************************************************
             1     6.7    0.0     0.0     0.0     0.0     0.0    0.0
             2     6.4    0.0     0.0     0.0     0.0     0.0    0.0
             3     6.5    0.0     0.0     0.0     0.0     0.0    0.0
             4     6.4    0.0     0.0     0.0     0.0     0.0    0.0
             5     6.5    0.0     0.0     0.0     0.0     0.0    0.0
             6     6.4    0.0     0.0     0.0     0.0     0.0    0.0
             7     6.4    0.0     0.0     0.0     0.0     0.0    0.0
             8     6.8    0.0     0.0     0.0     0.0     0.0    0.0
             9     6.5    0.0     0.0     0.0     0.0     0.0    0.0
            10     6.5    0.0     0.0     0.0     0.0     0.0    0.0
            11     6.6    0.0     0.0     0.0     0.0     0.0    0.0
            12     6.3    0.0     0.0     0.0     0.0     0.0    0.0
            13     6.4    0.0     0.0     0.0     0.0     0.0    0.0
            14     6.6    0.0     0.0     0.0     0.0     0.0    0.0
            15     6.7    0.0     0.0     0.0     0.0     0.0    0.0
            16     6.5    0.0     0.0     0.0     0.0     0.0    0.0
            17     6.4    0.0     0.0     0.0     0.0     0.0    0.0
            18     6.5    0.0     0.0     0.0     0.0     0.0    0.0
            19     6.8    0.0     0.0     0.0     0.0     0.0    0.0
            20     6.3    0.0     0.0     0.0     0.0     0.0    0.0


        MEAN       6.5    0.0     0.0     0.0     0.0     0.0    0.0

     STD DEV        .1    0.0     0.0     0.0     0.0     0.0    0.0

     0.0 = NOT RECORDED

     MEASUREMENTS IN CENTIMETERS
```

AGROPYRON SMITHII   STUDY AREA BUD KIMBAL   DATE 28 AUGUST 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE		MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
	VEG.	REPR.					
1	6.8	0.0	0.0	0.0	0.0	0.0	0.0
2	6.7	0.0	0.0	0.0	0.0	0.0	0.0
3	8.0	0.0	0.0	0.0	0.0	0.0	0.0
4	6.9	0.0	0.0	0.0	0.0	0.0	0.0
5	6.8	0.0	0.0	0.0	0.0	0.0	0.0
6	6.9	0.0	0.0	0.0	0.0	0.0	0.0
7	6.7	0.0	0.0	0.0	0.0	0.0	0.0
8	8.0	0.0	0.0	0.0	0.0	0.0	0.0
9	8.0	0.0	0.0	0.0	0.0	0.0	0.0
10	6.7	0.0	0.0	0.0	0.0	0.0	0.0
11	6.7	0.0	0.0	0.0	0.0	0.0	0.0
12	6.8	0.0	0.0	0.0	0.0	0.0	0.0
13	6.7	0.0	0.0	0.0	0.0	0.0	0.0
14	6.8	0.0	0.0	0.0	0.0	0.0	0.0
15	8.0	0.0	0.0	0.0	0.0	0.0	0.0
16	6.9	0.0	0.0	0.0	0.0	0.0	0.0
17	6.7	0.0	0.0	0.0	0.0	0.0	0.0
18	6.7	0.0	0.0	0.0	0.0	0.0	0.0
19	8.0	0.0	0.0	0.0	0.0	0.0	0.0
20	6.9	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	7.1	0.0	0.0	0.0	0.0	0.0	0.0
STD DEV	.5	0.0	0.0	0.0	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ACROPYRON SMITHII        STUDY AREA CUMBER. 3            DATE 30 APRIL      1982
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      PLANT  PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.   NOS.
       NO.   STAGE  SCORE   LEAF    LEAF    SPIKE   SPK/   VEG.
             VEG.   REPR.   WIDTH   HGHT.   HGHT.   CULM   PLANT
*************************************************************************************
         1   2.2    0.0      .1      7.0    0.0     0.0    1.0
         2   2.3    0.0      .1     10.0    0.0     0.0    2.0
         3   2.1    0.0      .1      5.0    0.0     0.0    2.0
         4   2.1    0.0      .1      5.0    0.0     0.0    2.0
         5   3.4    0.0      .1      7.0    0.0     0.0    3.0
         6   3.0    0.0      .1      5.0    0.0     0.0    1.0
         7   4.0    0.0      .3      4.0    0.0     0.0    2.0
         8   3.1    0.0      .2      6.5    0.0     0.0    2.0
         9   3.3    0.0      .3      4.0    0.0     0.0    2.0
        10   4.0    0.0      .2      5.0    0.0     0.0    2.0
        11   3.0    0.0      .2      7.5    0.0     0.0    4.0
        12   3.0    0.0      .2      8.0    0.0     0.0    2.0
        13   3.1    0.0      .1      5.0    0.0     0.0    1.0
        14   3.0    0.0      .2      7.5    0.0     0.0    1.0
        15   2.0    0.0      .2     11.0    0.0     0.0    1.0
        16   2.0    0.0      .2      5.0    0.0     0.0    1.0
        17   2.0    0.0      .2      6.5    0.0     0.0    3.0
        18   2.0    0.0      .2      3.0    0.0     0.0    1.0
        19   2.5    0.0      .2      5.5    0.0     0.0    1.0
        20   3.0    0.0      .2      5.5    0.0     0.0    1.0


     MEAN    2.8    0.0      .2      6.2    0.0     0.0    1.8

  STD DEV     .7    0.0      .1      2.0    0.0     0.0     .9

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ACROPYRON SMITHII        STUDY AREA CUMBER. 3            DATE 03 JUNE        1982
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       PLANT   PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.   NOS.
        NO.    STAGE  SCORE   LEAF    LEAF    SPIKE   SPK/   VEG.
               VEG.   REPR.   WIDTH   HGHT.   HGHT.   CULM   PLANT
***************************************************************************************
          1    4.9    0.0      .3     21.0    0.0     0.0    0.0
          2    5.6    0.0      .3     19.0    0.0     0.0    0.0
          3    4.9    C.0      .2     13.5    0.0     0.0    0.0
          4    4.9    0.0      .3     15.0    0.0     0.0    0.0
          5    5.4    0.0      .3     14.0    0.0     0.0    0.0
          6    4.8    0.0      .3     28.0    0.0     0.0    0.0
          7    5.5    0.0      .2     14.0    0.0     0.0    0.0
          8    4.2    0.0      .2     10.5    0.0     0.0    0.0
          9    4.4    0.0      .3     23.0    0.0     0.0    0.0
         10    5.3    0.0      .3     21.0    0.0     0.0    0.0
         11    5.7    0.0      .3     15.0    0.0     0.0    0.0
         12    5.4    C.0      .2     14.0    0.0     0.0    0.0
         13    4.9    0.0      .3     16.5    0.0     0.0    0.0
         14    5.5    0.0      .3     19.5    0.0     0.0    0.0
         15    4.9    0.0      .3     19.0    0.0     0.0    0.0
         16    5.9    0.0      .3     17.0    0.0     0.0    0.0
         17    4.9    0.0      .3     22.0    0.0     0.0    0.0
         18    5.2    0.0      .3     21.5    0.0     0.0    0.0
         19    5.4    0.0      .2     21.0    0.0     0.0    0.0
         20    5.3    0.0      .3     18.0    0.0     0.0    0.0


       MEAN    5.1    0.0      .3     18.1    0.0     0.0    0.0

    STD DEV     .4    0.0      .0      4.2    0.0     0.0    0.0

    0.0 = NOT RECORDED

    MEASUREMENTS IN CENTIMETERS
```

ACROPYRON SMITHII STUDY AREA CUMBER. 3 DATE 15 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.0	0.0	.2	22.5	0.0	0.0	0.0
2	5.0	0.0	.2	10.5	0.0	0.0	0.0
3	4.9	0.0	.2	12.0	0.0	0.0	0.0
4	5.1	0.0	.2	20.0	0.0	0.0	0.0
5	5.0	0.0	.2	15.5	0.0	0.0	0.0
6	5.1	0.0	.1	12.5	0.0	0.0	0.0
7	5.1	0.0	.2	14.0	0.0	0.0	0.0
8	5.2	0.0	.2	19.0	0.0	0.0	0.0
9	5.1	0.0	.3	10.5	0.0	0.0	0.0
10	5.2	0.0	.3	29.0	0.0	0.0	0.0
11	5.1	0.0	.2	16.2	0.0	0.0	0.0
12	5.4	0.0	.3	29.0	0.0	0.0	0.0
13	5.2	0.0	.3	22.0	0.0	0.0	0.0
14	5.0	0.0	.4	19.0	0.0	0.0	0.0
15	5.1	0.0	.3	22.5	0.0	0.0	0.0
16	5.1	0.0	.2	20.5	0.0	0.0	0.0
17	5.2	0.0	.2	19.5	0.0	0.0	0.0
18	5.2	0.0	.2	22.0	0.0	0.0	0.0
19	4.9	0.0	.1	10.0	0.0	0.0	0.0
20	5.2	0.0	.3	15.5	0.0	0.0	0.0
MEAN	5.2	0.0	.2	18.1	0.0	0.0	0.0
STD DEV	.2	0.0	.1	5.6	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ACROPYRON SMITHII        STUDY AREA CUMBER. 3            DATE 29 JUNE       1982
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        PLANT   PHENOLOGICAL  MAX.    MAX.    MAX.    NOS.   NOS.
         NO.    STAGE  SCORE  LEAF    LEAF    SPIKE   SPK/   VEG.
                VEG.   REPR.  WIDTH   HGHT.   HGHT.   CULM   PLANT
*******************************************************************************
           1    6.0    0.0      .2    23.0    0.0     0.0    0.0
           2    6.0    0.0      .1    13.0    0.0     0.0    0.0
           3    6.0    0.0      .2    22.0    0.0     0.0    0.0
           4    6.0    0.0      .2    17.0    0.0     0.0    0.0
           5    6.0    0.0      .2    14.0    0.0     0.0    0.0
           6    6.0    0.0      .2    21.0    0.0     0.0    0.0
           7    6.0    0.0      .2    18.0    0.0     0.0    0.0
           8    6.0    0.0      .1    16.0    0.0     0.0    0.0
           9    4.9    0.0      .1    17.0    0.0     0.0    0.0
          10    6.0    0.0      .2    22.0    0.0     0.0    0.0
          11    4.8    0.0      .2    18.5    0.0     0.0    0.0
          12    5.3    0.0      .2    21.0    0.0     0.0    0.0
          13    4.9    0.0      .2    27.0    0.0     0.0    0.0
          14    6.0    0.0      .2    19.5    0.0     0.0    0.0
          15    6.0    0.0      .2    26.0    0.0     0.0    0.0
          16    4.5    0.0      .2    21.5    0.0     0.0    0.0
          17    4.8    0.0      .3    33.5    0.0     0.0    0.0
          18    6.0    0.0      .2    18.5    0.0     0.0    0.0
          19    6.0    0.0      .2    20.0    0.0     0.0    0.0
          20    6.0    0.0      .1    21.0    0.0     0.0    0.0


        MEAN    5.7    0.0      .2    20.5    0.0     0.0    0.0

     STD DEV     .5    0.0      .0     4.7    0.0     0.0    0.0

     0.0 = NOT RECORDED

     MEASUREMENTS IN CENTIMETERS
```

ACROPYRON SMITHII   STUDY AREA CUMBER. 3   DATE 11 JULY 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.2	0.0	.2	11.0	0.0	0.0	0.0
2	6.2	0.0	.3	22.0	0.0	0.0	0.0
3	6.3	0.0	.2	16.0	0.0	0.0	0.0
4	6.1	0.0	.3	25.0	0.0	0.0	0.0
5	6.2	0.0	.3	21.0	0.0	0.0	0.0
6	6.1	0.0	.3	24.5	0.0	0.0	0.0
7	6.3	0.0	.2	18.0	0.0	0.0	0.0
8	6.2	0.0	.3	31.0	0.0	0.0	0.0
9	6.2	0.0	.3	23.0	0.0	0.0	0.0
10	6.2	0.0	.3	43.0	0.0	0.0	0.0
11	6.3	0.0	.2	14.5	0.0	0.0	0.0
12	6.3	0.0	.2	10.0	0.0	0.0	0.0
13	6.2	0.0	.2	17.0	0.0	0.0	0.0
14	6.2	0.0	.3	29.0	0.0	0.0	0.0
15	6.1	0.0	.3	20.0	0.0	0.0	0.0
16	6.1	0.0	.2	20.0	0.0	0.0	0.0
17	6.1	0.0	.2	18.0	0.0	0.0	0.0
18	6.2	0.0	.2	22.0	0.0	0.0	0.0
19	6.2	0.0	.2	22.0	0.0	0.0	0.0
20	6.1	0.0	.2	19.0	0.0	0.0	0.0
MEAN	6.2	0.0	.2	21.3	0.0	0.0	0.0
STD DEV	.1	0.0	.1	7.3	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ACROPYRON SMITHII       STUDY AREA CUMBER. 3          DATE 27 JULY        1982
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      PLANT   PHENOLOGICAL  MAX.    MAX.    MAX.    NOS.   NOS.
       NO.    STAGE  SCORE  LEAF    LEAF    SPIKE   SPK/   VEG.
              VEG.   REPR.  WIDTH   HGHT.   HGHT.   CULM   PLANT
***************************************************************************
         1    6.4    0.0     .3     23.0    0.0     0.0    0.0
         2    6.4    0.0     .3     20.0    0.0     0.0    0.0
         3    6.4    0.0     .3     28.0    0.0     0.0    0.0
         4    6.5    0.0     .2     18.0    0.0     0.0    0.0
         5    6.4    0.0     .2     19.5    0.0     0.0    0.0
         6    6.4    0.0     .3     27.5    0.0     0.0    0.0
         7    6.2    0.0     .3     15.0    0.0     0.0    0.0
         8    6.3    0.0     .2     11.0    0.0     0.0    0.0
         9    6.4    0.0     .3     27.0    0.0     0.0    0.0
        10    6.4    0.0     .3     24.0    0.0     0.0    0.0
        11    6.3    0.0     .3     18.0    0.0     0.0    0.0
        12    6.4    0.0     .2     16.0    0.0     0.0    0.0
        13    6.3    0.0     .3     23.0    0.0     0.0    0.0
        14    6.4    0.0     .3     20.0    0.0     0.0    0.0
        15    6.4    0.0     .3     23.0    0.0     0.0    0.0
        16    6.3    0.0     .3     24.0    0.0     0.0    0.0
        17    6.3    0.0     .3     33.0    0.0     0.0    0.0
        18    6.3    0.0     .3     26.0    0.0     0.0    0.0
        19    6.4    0.0     .3     20.0    0.0     0.0    0.0
        20    6.3    0.0     .2     20.0    0.0     0.0    0.0


      MEAN    6.4    0.0     .3     21.8    0.0     0.0    0.0

   STD DEV     .1    0.0     .0      5.1    0.0     0.0    0.0

   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
```

ACROPYRON SMITHII   STUDY AREA CUMBER. 3   DATE 9 AUGUST 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.3	0.0	0.0	0.0	0.0	0.0	0.0
2	6.4	0.0	0.0	0.0	0.0	0.0	0.0
3	6.4	0.0	0.0	0.0	0.0	0.0	0.0
4	6.4	0.0	0.0	0.0	0.0	0.0	0.0
5	6.5	0.0	0.0	0.0	0.0	0.0	0.0
6	6.3	0.0	0.0	0.0	0.0	0.0	0.0
7	6.3	0.0	0.0	0.0	0.0	0.0	0.0
8	6.3	0.0	0.0	0.0	0.0	0.0	0.0
9	6.4	0.0	0.0	0.0	0.0	0.0	0.0
10	6.4	0.0	0.0	0.0	0.0	0.0	0.0
11	6.5	0.0	0.0	0.0	0.0	0.0	0.0
12	6.3	0.0	0.0	0.0	0.0	0.0	0.0
13	6.4	0.0	0.0	0.0	0.0	0.0	0.0
14	6.5	0.0	0.0	0.0	0.0	0.0	0.0
15	6.4	0.0	0.0	0.0	0.0	0.0	0.0
16	6.3	0.0	0.0	0.0	0.0	0.0	0.0
17	6.3	0.0	0.0	0.0	0.0	0.0	0.0
18	6.4	0.0	0.0	0.0	0.0	0.0	0.0
19	6.5	0.0	0.0	0.0	0.0	0.0	0.0
20	6.3	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	6.4	0.0	0.0	0.0	0.0	0.0	0.0
STD DEV	.1	0.0	0.0	0.0	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

```
AGROPYRON SMITHII        STUDY AREA DEMER                DATE 30 APRIL     1982
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       PLANT  PHENOLOGICAL  MAX.    MAX.    MAX.    NOS.   NOS.
        NO.   STAGE  SCORE  LEAF    LEAF    SPIKE   SPK/   VEG.
              VEG.   REPR.  WIDTH   HGHT.   HGHT.   CULM   PLANT
**********************************************************************************
         1     3.5    0.0    0.0     8.5     0.0     0.0     0.0
         2     4.5    0.0    0.0    14.0     0.0     0.0     0.0
         3     3.5    0.0    0.0    11.3     0.0     0.0     0.0
         4     4.2    0.0    0.0    13.0     0.0     0.0     0.0
         5     4.2    0.0    0.0    11.0     0.0     0.0     0.0
         6     4.3    0.0    0.0    12.0     0.0     0.0     0.0
         7     3.5    0.0    0.0    11.0     0.0     0.0     0.0
         8     4.6    0.0    0.0    14.0     0.0     0.0     0.0
         9     4.5    0.0    0.0    12.0     0.0     0.0     0.0
        10     4.7    0.0    0.0    16.5     0.0     0.0     0.0
        11     4.3    0.0    0.0    16.0     0.0     0.0     0.0
        12     4.7    0.0    0.0    15.5     0.0     0.0     0.0
        13     4.5    0.0    0.0    16.0     0.0     0.0     0.0
        14     4.9    0.0    0.0    19.0     0.0     0.0     0.0
        15     4.3    0.0    0.0    10.0     0.0     0.0     0.0
        16     4.3    0.0    0.0    13.0     0.0     0.0     0.0
        17     4.7    0.0    0.0    12.5     0.0     0.0     0.0
        18     4.5    0.0    0.0    11.0     0.0     0.0     0.0
        19     4.6    0.0    0.0    15.0     0.0     0.0     0.0
        20     4.5    0.0    0.0    11.0     0.0     0.0     0.0


      MEAN     4.3    0.0    0.0    13.1     0.0     0.0     0.0

   STD DEV      .4    0.0    0.0     2.6     0.0     0.0     0.0


   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
```

AGROPYRON SMITHII STUDY AREA DEMER DATE 18 MAY 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	3.8	0.0	.1	7.5	0.0	0.0	1.0
2	4.5	0.0	.1	12.0	0.0	0.0	1.0
3	4.2	0.0	.1	13.0	0.0	0.0	1.0
4	4.2	0.0	.1	10.0	0.0	0.0	2.0
5	4.6	0.0	.2	17.0	0.0	0.0	3.0
6	4.8	0.0	.1	13.5	0.0	0.0	1.0
7	4.5	0.0	.1	12.0	0.0	0.0	1.0
8	3.6	0.0	.1	13.0	0.0	0.0	1.0
9	4.9	0.0	.2	12.5	0.0	0.0	1.0
10	4.8	0.0	.2	14.0	0.0	0.0	1.0
11	4.7	0.0	.1	14.0	0.0	0.0	1.0
12	4.9	0.0	.1	16.0	0.0	0.0	1.0
13	3.9	0.0	.1	8.5	0.0	0.0	1.0
14	3.8	0.0	.2	5.5	0.0	0.0	1.0
15	4.9	0.0	.3	19.0	0.0	0.0	1.0
16	4.7	0.0	.1	14.0	0.0	0.0	1.0
17	4.8	0.0	.1	15.0	0.0	0.0	1.0
18	4.9	0.0	.1	20.0	0.0	0.0	1.0
19	4.8	0.0	.1	13.0	0.0	0.0	2.0
20	4.6	0.0	.1	16.0	0.0	0.0	1.0
MEAN	4.5	0.0	.1	13.3	0.0	0.0	1.2
STD DEV	.4	0.0	.1	3.6	0.0	0.0	.5

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

```
AGROPYRON SMITHII       STUDY AREA DEMER                   DATE 02 JUNE       1982
-------------------                ----------                     ----------------


       PLANT   PHENOLOGICAL  MAX.    MAX.    MAX.     NOS.   NOS.
        NO.    STAGE  SCORE  LEAF    LEAF    SPIKE    SPK/   VEG.
               VEG.   REPR.  WIDTH   HGHT.   HGHT.    CULM   PLANT
*******************************************************************************
          1    4.0    0.0      .3    12.0    0.0      0.0    0.0
          2    4.7    0.0      .2    13.5    0.0      0.0    0.0
          3    4.4    0.0      .2    12.0    0.0      0.0    0.0
          4    4.5    0.0      .2    13.0    0.0      0.0    0.0
          5    4.5    0.0      .2    17.0    0.0      0.0    0.0
          6    4.4    0.0      .2    11.0    0.0      0.0    0.0
          7    4.0    0.0      .2    10.0    0.0      0.0    0.0
          8    4.2    0.0      .2     8.5    0.0      0.0    0.0
          9    4.6    0.0      .2    15.5    0.0      0.0    0.0
         10    4.5    0.0      .3    15.5    0.0      0.0    0.0
         11    4.0    0.0      .2    11.0    0.0      0.0    0.0
         12    4.7    0.0      .3    17.5    0.0      0.0    0.0
         13    4.7    0.0      .2    27.0    0.0      0.0    0.0
         14    5.0    0.0      .4    29.0    0.0      0.0    0.0
         15    4.0    0.0      .1     8.0    0.0      0.0    0.0
         16    4.8    0.0      .3    14.0    0.0      0.0    0.0
         17    4.8    0.0      .3    13.0    0.0      0.0    0.0
         18    4.9    0.0      .2    11.5    0.0      0.0    0.0
         19    4.7    0.0      .2    14.5    0.0      0.0    0.0
         20    4.3    0.0      .2    11.5    0.0      0.0    0.0


       MEAN    4.5    0.0      .2    14.3    0.0      0.0    0.0

    STD DEV     .3    0.0      .1     5.3    0.0      0.0    0.0

    0.0 = NOT RECORDED

    MEASUREMENTS IN CENTIMETERS
```

```
AGROPYRON SMITHII         STUDY AREA DEMER                  DATE 29 JUNE       1982
--------------------                 ----------                    -----------------

      PLANT   PHENOLOGICAL  MAX.    MAX.    MAX.    NOS.   NOS.
       NO.    STAGE  SCORE  LEAF    LEAF    SPIKE   SPK/   VEG.
              VEG.   REPR.  WIDTH   HGHT.   HGHT.   CULM   PLANT
***********************************************************************************
         1    4.8    0.0     .1      9.5    0.0     0.0     0.0
         2    5.3    0.0     .2     16.0    0.0     0.0     0.0
         3    4.9    0.0     .2     11.0    0.0     0.0     0.0
         4    5.0    0.0     .2     14.5    0.0     0.0     0.0
         5    5.3    0.0     .3     17.0    0.0     0.0     0.0
         6    5.3    0.0     .2     14.5    0.0     0.0     0.0
         7    4.9    0.0     .2     11.0    0.0     0.0     0.0
         8    4.9    0.0     .1      9.5    0.0     0.0     0.0
         9    5.3    0.0     .2     15.5    0.0     0.0     0.0
        10    5.3    0.0     .2     16.0    0.0     0.0     0.0
        11    5.4    0.0     .2     11.0    0.0     0.0     0.0
        12    5.3    0.0     .2     16.5    0.0     0.0     0.0
        13    5.4    0.0     .2     18.5    0.0     0.0     0.0
        14    5.4    0.0     .3     21.5    0.0     0.0     0.0
        15    4.9    0.0     .1      9.0    0.0     0.0     0.0
        16    4.9    0.0     .1     13.5    0.0     0.0     0.0
        17    5.3    0.0     .2     12.5    0.0     0.0     0.0
        18    5.3    0.0     .2     19.5    0.0     0.0     0.0
        19    5.0    0.0     .1     13.5    0.0     0.0     0.0
        20    5.0    0.0     .2     13.0    0.0     0.0     0.0


      MEAN    5.1    0.0     .2     14.2    0.0     0.0     0.0

   STD DEV     .2    0.0     .1      3.5    0.0     0.0     0.0

   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
```

AGROPYRON SMITHII STUDY AREA DEMER DATE 10 JULY 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE		MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
	VEG.	REPR.					
1	6.0	0.0	.1	10.5	0.0	0.0	0.0
2	6.1	0.0	.2	14.0	0.0	0.0	0.0
3	6.0	0.0	.1	11.0	0.0	0.0	0.0
4	6.0	0.0	.1	13.0	0.0	0.0	0.0
5	6.0	0.0	.2	17.0	0.0	0.0	0.0
6	6.2	0.0	.1	12.0	0.0	0.0	0.0
7	6.1	0.0	.1	10.0	0.0	0.0	0.0
8	6.2	0.0	.1	9.5	0.0	0.0	0.0
9	4.9	0.0	.2	15.0	0.0	0.0	0.0
10	6.0	0.0	.2	16.0	0.0	0.0	0.0
11	6.0	0.0	.1	11.0	0.0	0.0	0.0
12	6.2	0.0	.2	18.0	0.0	0.0	0.0
13	6.2	0.0	.1	22.0	0.0	0.0	0.0
14	4.9	0.0	.2	18.0	0.0	0.0	0.0
15	6.1	0.0	.1	11.0	0.0	0.0	0.0
16	6.0	0.0	.2	15.0	0.0	0.0	0.0
17	4.9	0.0	.1	13.0	0.0	0.0	0.0
18	6.0	0.0	.2	19.5	0.0	0.0	0.0
19	6.1	0.0	.1	14.5	0.0	0.0	0.0
20	6.0	0.0	.1	13.5	0.0	0.0	0.0
MEAN	5.9	0.0	.1	14.2	0.0	0.0	0.0
STD DEV	.4	0.0	.1	3.4	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

```
  AGROPYRON SMITHII      STUDY AREA DEMER                 DATE 25 JULY      1982
  --------------------              ----------                 -----------------

         PLANT  PHENOLOGICAL   MAX.   MAX.   MAX.   NOS.   NOS.
          NO.   STAGE  SCORE   LEAF   LEAF   SPIKE  SPK/   VEG.
                VEG.   REPR.   WIDTH HGHT.   HGHT.  CULM   PLANT
**********************************************************************************
            1   6.4    0.0      .1   11.0    0.0    0.0     0.0
            2   6.2    0.0      .2   15.0    0.0    0.0     0.0
            3   6.4    0.0      .1    7.5    0.0    0.0     0.0
            4   6.4    0.0      .1   14.0    0.0    0.0     0.0
            5   6.3    0.0      .2   15.0    0.0    0.0     0.0
            6   6.4    0.0      .1   11.5    0.0    0.0     0.0
            7   6.3    0.0      .1   10.5    0.0    0.0     0.0
            8   6.4    0.0      .1   10.0    0.0    0.0     0.0
            9   6.2    0.0      .2   15.0    0.0    0.0     0.0
           10   6.3    0.0      .2   17.5    0.0    0.0     0.0
           11   6.4    0.0      .1   11.0    0.0    0.0     0.0
           12   6.2    0.0      .1   14.5    0.0    0.0     0.0
           13   6.3    0.0      .2   18.5    0.0    0.0     0.0
           14   6.3    0.0      .2   21.5    0.0    0.0     0.0
           15   6.3    0.0      .1   10.0    0.0    0.0     0.0
           16   6.2    0.0      .1   16.0    0.0    0.0     0.0
           17   6.2    0.0      .1   12.0    0.0    0.0     0.0
           18   6.2    0.0      .1   16.0    0.0    0.0     0.0
           19   6.3    0.0      .1   14.5    0.0    0.0     0.0
           20   6.3    0.0      .1   15.0    0.0    0.0     0.0


       MEAN     6.3    0.0      .1   13.8    0.0    0.0     0.0

    STD DEV      .1    0.0      .0    3.4    0.0    0.0     0.0

    0.0 = NOT RECORDED

    MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII       STUDY AREA DEMER                  DATE  9 AUGUST     1982
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      PLANT   PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.   NOS.
       NO.    STAGE  SCORE   LEAF    LEAF    SPIKE   SPK/   VEG.
              VEG.   REPR.   WIDTH   HGHT.   HGHT.   CULM   PLANT
******************************************************************************
         1    6.5    0.0     0.0     0.0     0.0     0.0     0.0
         2    6.2    0.0     0.0     0.0     0.0     0.0     0.0
         3    6.3    0.0     0.0     0.0     0.0     0.0     0.0
         4    6.2    0.0     0.0     0.0     0.0     0.0     0.0
         5    6.4    0.0     0.0     0.0     0.0     0.0     0.0
         6    6.4    0.0     0.0     0.0     0.0     0.0     0.0
         7    6.3    0.0     0.0     0.0     0.0     0.0     0.0
         8    6.2    0.0     0.0     0.0     0.0     0.0     0.0
         9    6.2    0.0     0.0     0.0     0.0     0.0     0.0
        10    6.5    0.0     0.0     0.0     0.0     0.0     0.0
        11    6.5    0.0     0.0     0.0     0.0     0.0     0.0
        12    6.8    0.0     0.0     0.0     0.0     0.0     0.0
        13    6.3    0.0     0.0     0.0     0.0     0.0     0.0
        14    6.4    0.0     0.0     0.0     0.0     0.0     0.0
        15    6.3    0.0     0.0     0.0     0.0     0.0     0.0
        16    6.1    0.0     0.0     0.0     0.0     0.0     0.0
        17    6.2    0.0     0.0     0.0     0.0     0.0     0.0
        18    6.2    0.0     0.0     0.0     0.0     0.0     0.0
        19    6.3    0.0     0.0     0.0     0.0     0.0     0.0
        20    6.4    0.0     0.0     0.0     0.0     0.0     0.0


     MEAN     6.3    0.0     0.0     0.0     0.0     0.0     0.0

  STD DEV      .2    0.0     0.0     0.0     0.0     0.0     0.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
```

AGROPYRON SMITHII STUDY AREA FARSON DATE 30 APRIL 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	3.4	0.0	.2	7.0	0.0	0.0	4.0
2	3.9	0.0	.3	12.5	0.0	0.0	1.0
3	4.3	0.0	.2	7.0	0.0	0.0	1.0
4	3.8	0.0	.1	6.5	0.0	0.0	3.0
5	3.8	0.0	.2	6.5	0.0	0.0	1.0
6	3.1	0.0	.1	6.5	0.0	0.0	2.0
7	3.5	0.0	.1	5.0	0.0	0.0	2.0
8	3.2	0.0	.1	6.0	0.0	0.0	2.0
9	3.6	0.0	.1	7.0	0.0	0.0	2.0
10	3.7	0.0	.1	6.0	0.0	0.0	5.0
11	3.4	0.0	.2	7.5	0.0	0.0	1.0
12	1.0	0.0	0.0	0.0	0.0	0.0	0.0
13	1.0	0.0	0.0	0.0	0.0	0.0	0.0
14	1.0	0.0	0.0	0.0	0.0	0.0	0.0
15	1.0	0.0	0.0	0.0	0.0	0.0	0.0
16	3.5	0.0	.2	5.0	0.0	0.0	1.0
17	3.8	0.0	.2	9.0	0.0	0.0	2.0
18	3.2	0.0	.2	7.0	0.0	0.0	1.0
19	3.3	0.0	.2	7.0	0.0	0.0	1.0
20	3.9	0.0	.3	9.0	0.0	0.0	5.0
MEAN	3.1	0.0	.2	7.2	0.0	0.0	2.1
STD DEV	1.1	0.0	.1	1.8	0.0	0.0	1.4

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII   STUDY AREA FARSON   DATE 19 MAY   1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	4.9	0.0	.2	10.5	0.0	0.0	4.0
2	4.9	0.0	.3	19.5	0.0	0.0	2.0
3	5.2	0.0	.2	7.0	0.0	0.0	1.0
4	3.9	0.0	.3	22.5	0.0	0.0	2.0
5	4.6	0.0	.3	10.0	0.0	0.0	1.0
6	4.7	0.0	.2	11.5	0.0	0.0	1.0
7	4.4	0.0	.2	8.0	0.0	0.0	1.0
8	4.7	0.0	.3	8.5	0.0	0.0	2.0
9	3.6	0.0	.2	9.0	0.0	0.0	2.0
10	4.7	0.0	.2	7.0	0.0	0.0	1.0
11	4.9	0.0	.2	11.0	0.0	0.0	1.0
12	4.7	0.0	.2	10.0	0.0	0.0	1.0
13	4.7	0.0	.1	11.5	0.0	0.0	4.0
14	4.7	0.0	.3	11.0	0.0	0.0	1.0
15	3.9	0.0	.3	11.0	0.0	0.0	1.0
16	4.8	0.0	.2	10.0	0.0	0.0	1.0
17	4.9	0.0	.2	13.0	0.0	0.0	2.0
18	3.7	0.0	.1	10.0	0.0	0.0	1.0
19	2.6	0.0	.2	4.0	0.0	0.0	1.0
20	4.9	0.0	.3	15.5	0.0	0.0	5.0
MEAN	4.5	0.0	.2	11.0	0.0	0.0	1.8
STD DEV	.6	0.0	.1	4.2	0.0	0.0	1.2

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII STUDY AREA FARSON DATE 3 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	4.9	0.0	.2	12.5	0.0	0.0	0.0
2	4.5	0.0	.2	26.0	0.0	0.0	0.0
3	4.5	0.0	.1	13.5	0.0	0.0	0.0
4	4.5	0.0	.2	24.0	0.0	0.0	0.0
5	4.5	0.0	.2	10.5	0.0	0.0	0.0
6	4.8	0.0	.2	11.0	0.0	0.0	0.0
7	4.4	0.0	.1	10.5	0.0	0.0	0.0
8	4.1	0.0	.2	9.0	0.0	0.0	0.0
9	4.5	0.0	.2	9.5	0.0	0.0	0.0
10	4.1	0.0	.2	14.5	0.0	0.0	0.0
11	4.4	0.0	.1	17.0	0.0	0.0	0.0
12	4.5	0.0	.1	13.5	0.0	0.0	0.0
13	4.4	0.0	.1	11.0	0.0	0.0	0.0
14	4.9	0.0	.2	16.0	0.0	0.0	0.0
15	4.8	0.0	.2	13.0	0.0	0.0	0.0
16	4.4	0.0	.2	12.0	0.0	0.0	0.0
17	4.5	0.0	.2	17.0	0.0	0.0	0.0
18	4.3	0.0	.1	10.0	0.0	0.0	0.0
19	4.0	0.0	.2	7.5	0.0	0.0	0.0
20	4.0	0.0	.3	18.5	0.0	0.0	0.0
MEAN	4.5	0.0	.2	13.8	0.0	0.0	0.0
STD DEV	.3	0.0	.1	4.8	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

```
AGROPYRON SMITHII        STUDY AREA FARSON              DATE 15 JUNE      1982
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       PLANT  PHENOLOGICAL  MAX.    MAX.    MAX.    NOS.   NOS.
        NO.   STAGE  SCORE  LEAF    LEAF    SPIKE   SPK/   VEG.
              VEG.   REPR.  WIDTH   HGHT.   HGHT.   CULM   PLANT
*****************************************************************************
          1   4.7    0.0      .1    11.0    0.0     0.0     0.0
          2   4.3    0.0      .2    17.5    0.0     0.0     0.0
          3   5.0    0.0      .2    12.0    0.0     0.0     0.0
          4   4.2    0.0      .1    11.5    0.0     0.0     0.0
          5   4.2    0.0      .2    12.5    0.0     0.0     0.0
          6   4.7    0.0      .2    15.0    0.0     0.0     0.0
          7   4.5    0.0      .1    11.5    0.0     0.0     0.0
          8   4.3    0.0      .2     9.0    0.0     0.0     0.0
          9   4.0    0.0      .1     9.0    0.0     0.0     0.0
         10   4.4    0.0      .2    15.5    0.0     0.0     0.0
         11   4.3    0.0      .2    16.5    0.0     0.0     0.0
         12   4.4    0.0      .1    15.5    0.0     0.0     0.0
         13   4.5    0.0      .1    11.0    0.0     0.0     0.0
         14   4.8    0.0      .3    16.0    0.0     0.0     0.0
         15   4.4    0.0      .2    13.0    0.0     0.0     0.0
         16   4.5    0.0      .3    13.0    0.0     0.0     0.0
         17   4.7    0.0      .2    16.5    0.0     0.0     0.0
         18   4.5    0.0      .1    16.0    0.0     0.0     0.0
         19   4.5    0.0      .3    10.0    0.0     0.0     0.0
         20   4.3    0.0      .2    20.0    0.0     0.0     0.0


      MEAN    4.5    0.0      .2    13.6    0.0     0.0     0.0

   STD DEV     .2    0.0      .1     3.0    0.0     0.0     0.0

   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII　　STUDY AREA FARSON　　DATE 30 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	4.8	0.0	.2	13.0	0.0	0.0	0.0
2	6.4	0.0	.2	22.0	0.0	0.0	0.0
3	6.1	0.0	.2	11.5	0.0	0.0	0.0
4	6.1	0.0	.2	18.0	0.0	0.0	0.0
5	6.1	0.0	.2	11.0	0.0	0.0	0.0
6	6.3	0.0	.2	14.0	0.0	0.0	0.0
7	4.7	0.0	.2	13.0	0.0	0.0	0.0
8	6.2	0.0	.2	13.0	0.0	0.0	0.0
9	6.3	0.0	.1	18.0	0.0	0.0	0.0
10	6.1	0.0	.2	15.0	0.0	0.0	0.0
11	6.2	0.0	.2	17.5	0.0	0.0	0.0
12	6.1	0.0	.2	16.0	0.0	0.0	0.0
13	6.1	0.0	.2	11.5	0.0	0.0	0.0
14	6.1	0.0	.3	16.0	0.0	0.0	0.0
15	6.1	0.0	.2	14.0	0.0	0.0	0.0
16	6.1	0.0	.2	12.5	0.0	0.0	0.0
17	6.3	0.0	.1	17.0	0.0	0.0	0.0
18	6.2	0.0	.1	9.5	0.0	0.0	0.0
19	6.2	0.0	.2	20.5	0.0	0.0	0.0
20	6.1	0.0	.2	20.0	0.0	0.0	0.0
MEAN	6.0	0.0	.2	15.2	0.0	0.0	0.0
STD DEV	.4	0.0	.0	3.4	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

```
AGROPYRON SMITHII        STUDY AREA FARSON                DATE 10 JULY       1982
-----------------                   ---------                     ---------------


     PLANT   PHENOLOGICAL  MAX.    MAX.    MAX.    NOS.   NOS.
      NO.    STAGE  SCORE  LEAF    LEAF    SPIKE   SPK/   VEG.
             VEG.   REPR.  WIDTH   HGHT.   HGHT.   CULM   PLANT
*******************************************************************************
         1   6.3    0.0      .2    12.5    0.0     0.0     0.0
         2   6.4    0.0      .2    16.0    0.0     0.0     0.0
         3   6.5    0.0      .2    15.0    0.0     0.0     0.0
         4   6.5    0.0      .2    13.0    0.0     0.0     0.0
         5   6.5    0.0      .2    21.5    0.0     0.0     0.0
         6   6.3    0.0      .2    14.0    0.0     0.0     0.0
         7   6.6    0.0      .2    11.5    0.0     0.0     0.0
         8   6.3    0.0      .2     9.0    0.0     0.0     0.0
         9   6.4    0.0      .1    10.0    0.0     0.0     0.0
        10   6.3    0.0      .2    13.0    0.0     0.0     0.0
        11   6.5    0.0      .2    20.0    0.0     0.0     0.0
        12   6.3    0.0      .2    10.0    0.0     0.0     0.0
        13   6.4    0.0      .2    10.0    0.0     0.0     0.0
        14   6.3    0.0      .2     8.0    0.0     0.0     0.0
        15   6.2    0.0      .2    13.0    0.0     0.0     0.0
        16   6.2    0.0      .2    12.0    0.0     0.0     0.0
        17   6.3    0.0      .2    17.0    0.0     0.0     0.0
        18   6.5    0.0      .1    10.0    0.0     0.0     0.0
        19   6.5    0.0      .2    10.0    0.0     0.0     0.0
        20   6.3    0.0      .2    20.0    0.0     0.0     0.0


      MEAN   6.4    0.0      .2    13.3    0.0     0.0     0.0

   STD DEV    .1    0.0      .0     3.9    0.0     0.0     0.0


   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
```

```
AGROPYRON SMITHII        STUDY AREA FARSON              DATE 28 JULY       1982
-------------------                  ----------                     -----------------


     PLANT  PHENOLOGICAL   MAX.   MAX.   MAX.   NOS.   NOS.
      NO.   STAGE  SCORE   LEAF   LEAF   SPIKE  SPK/   VEG.
            VEG.   REPR.   WIDTH  HGHT.  HGHT.  CULM   PLANT
*************************************************************************************
       1    6.7    0.0     .2     13.0   0.0    0.0    0.0
       2    6.6    0.0     .2     24.0   0.0    0.0    0.0
       3    6.6    0.0     .2     11.5   0.0    0.0    0.0
       4    6.7    0.0     .2     14.0   0.0    0.0    0.0
       5    6.6    0.0     .3     13.5   0.0    0.0    0.0
       6    6.8    0.0     .2     15.5   0.0    0.0    0.0
       7    6.6    0.0     .2     13.0   0.0    0.0    0.0
       8    6.7    0.0     .2      9.5   0.0    0.0    0.0
       9    6.7    0.0     .2     10.0   0.0    0.0    0.0
      10    6.7    0.0     .2     15.5   0.0    0.0    0.0
      11    6.5    0.0     .2     18.0   0.0    0.0    0.0
      12    6.5    0.0     .2     25.0   0.0    0.0    0.0
      13    6.6    0.0     .2     13.5   0.0    0.0    0.0
      14    6.5    0.0     .2     17.0   0.0    0.0    0.0
      15    6.4    0.0     .2     22.0   0.0    0.0    0.0
      16    6.4    0.0     .2     16.0   0.0    0.0    0.0
      17    6.6    0.0     .2     19.0   0.0    0.0    0.0
      18    6.6    0.0     .1     10.0   0.0    0.0    0.0
      19    6.6    0.0     .2     21.5   0.0    0.0    0.0
      20    6.5    0.0     .3     21.0   0.0    0.0    0.0


    MEAN    6.6    0.0     .2     16.1   0.0    0.0    0.0

 STD DEV     .1    0.0     .0      4.7   0.0    0.0    0.0

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
```

```
AGROPYRON SMITHII       STUDY AREA FARSON             DATE  9 AUGUST    1982
-------------------                ----------              -----------------


       PLANT  PHENOLOGICAL  MAX.    MAX.    MAX.    NOS.   NOS.
        NO.   STAGE  SCORE  LEAF    LEAF    SPIKE   SPK/   VEG.
              VEG.   REPR.  WIDTH   HGHT.   HGHT.   CULM   PLANT
*******************************************************************************
          1   6.5    0.0    0.0     0.0     0.0     0.0    0.0
          2   6.6    0.0    0.0     0.0     0.0     0.0    0.0
          3   6.4    0.0    0.0     0.0     0.0     0.0    0.0
          4   6.5    0.0    0.0     0.0     0.0     0.0    0.0
          5   6.6    0.0    0.0     0.0     0.0     0.0    0.0
          6   6.6    0.0    0.0     0.0     0.0     0.0    0.0
          7   6.6    0.0    0.0     0.0     0.0     0.0    0.0
          8   6.6    0.0    0.0     0.0     0.0     0.0    0.0
          9   6.8    0.0    0.0     0.0     0.0     0.0    0.0
         10   6.7    0.0    0.0     0.0     0.0     0.0    0.0
         11   6.5    0.0    0.0     0.0     0.0     0.0    0.0
         12   6.6    0.0    0.0     0.0     0.0     0.0    0.0
         13   6.7    0.0    0.0     0.0     0.0     0.0    0.0
         14   6.5    0.0    0.0     0.0     0.0     0.0    0.0
         15   6.4    0.0    0.0     0.0     0.0     0.0    0.0
         16   6.6    0.0    0.0     0.0     0.0     0.0    0.0
         17   6.5    0.0    0.0     0.0     0.0     0.0    0.0
         18   6.9    0.0    0.0     0.0     0.0     0.0    0.0
         19   6.8    0.0    0.0     0.0     0.0     0.0    0.0
         20   6.5    0.0    0.0     0.0     0.0     0.0    0.0


       MEAN   6.6    0.0    0.0     0.0     0.0     0.0    0.0

    STD DEV    .1    0.0    0.0     0.0     0.0     0.0    0.0


    0.0 = NOT RECORDED

    MEASUREMENTS IN CENTIMETERS
```

AGROPYRON SMITHII STUDY AREA HORSE CK. DATE 30 APRIL 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	4.5	0.0	0.0	6.5	0.0	0.0	0.0
2	4.8	C.0	0.0	9.0	0.0	0.0	0.0
3	4.2	0.0	0.0	12.5	0.0	0.0	0.0
4	4.1	0.0	0.0	10.0	0.0	0.0	0.0
5	4.5	0.0	0.0	6.0	0.0	0.0	0.0
6	4.5	0.0	0.0	12.5	0.0	0.0	0.0
7	4.5	0.0	0.0	11.0	0.0	0.0	0.0
8	4.5	0.0	0.0	9.5	0.0	0.0	C.0
9	4.1	0.0	0.0	10.0	0.0	0.0	0.0
10	4.7	0.0	0.0	13.0	0.0	0.0	0.0
11	4.7	0.0	0.0	14.0	0.0	0.0	0.0
12	4.7	0.0	0.0	13.0	0.0	0.0	0.0
13	4.7	0.0	0.0	13.5	0.0	0.0	0.0
14	4.5	0.0	0.0	13.0	0.0	0.0	0.0
15	4.5	0.0	0.0	14.3	0.0	0.0	0.0
16	4.8	0.0	0.0	12.0	0.0	0.0	0.0
17	4.8	0.0	0.0	14.5	0.0	0.0	0.0
18	4.2	0.0	0.0	10.0	0.0	0.0	0.0
19	4.9	0.0	0.0	15.5	0.0	0.0	0.0
20	4.9	0.0	0.0	13.0	0.0	0.0	0.0
MEAN	4.6	0.0	0.0	11.6	0.0	0.0	0.0
STD DEV	.3	0.0	0.0	2.6	0.0	0.0	0.0

C.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII   STUDY AREA HORSE CK.   DATE 18 MAY   1982

PLANT NO.	PHENOLOGICAL STAGE SCORE		MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
	VEG.	REPR.					
1	4.1	0.0	.2	7.0	0.0	0.0	2.0
2	4.9	0.0	.3	12.0	0.0	0.0	1.0
3	4.9	0.0	.3	13.0	0.0	0.0	1.0
4	4.5	0.0	.2	14.0	0.0	0.0	2.0
5	4.8	0.0	.2	12.5	0.0	0.0	2.0
6	4.8	0.0	.3	14.0	0.0	0.0	1.0
7	5.2	0.0	.3	14.8	0.0	0.0	1.0
8	4.6	0.0	.3	11.0	0.0	0.0	1.0
9	3.9	0.0	.2	12.0	0.0	0.0	1.0
10	4.5	0.0	.3	18.0	0.0	0.0	1.0
11	4.9	0.0	.3	13.0	0.0	0.0	1.0
12	4.9	0.0	.3	9.0	0.0	0.0	1.0
13	4.9	0.0	.3	19.0	0.0	0.0	2.0
14	4.5	0.0	.3	11.0	0.0	0.0	2.0
15	5.3	0.0	.3	16.5	0.0	0.0	3.0
16	4.8	0.0	.3	14.5	0.0	0.0	1.0
17	4.9	0.0	.4	15.5	0.0	0.0	2.0
18	5.2	0.0	.3	12.5	0.0	0.0	1.0
19	4.1	0.0	.3	17.5	0.0	0.0	2.0
20	3.9	0.0	.2	10.0	0.0	0.0	2.0
MEAN	4.7	0.0	.3	13.3	0.0	0.0	1.5
STD DEV	.4	0.0	.1	3.0	0.0	0.0	.6

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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AGROPYRON SMITHII        STUDY AREA HORSE CK.             DATE 02 JUNE       1982
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      PLANT  PHENOLOGICAL   MAX.   MAX.    MAX.    NOS.   NOS.
       NO.   STAGE   SCORE  LEAF   LEAF    SPIKE   SPK/   VEG.
             VEG.    REPR.  WIDTH  HGHT.   HGHT.   CULM   PLANT
****************************************************************************************
         1   3.4     0.0     .2     8.0    0.0     0.0    0.0
         2   5.1     0.0     .3    18.0    0.0     0.0    0.0
         3   4.5     0.0     .2    10.0    0.0     0.0    0.0
         4   4.6     0.0     .3    13.0    0.0     0.0    0.0
         5   5.2     0.0     .2    15.5    0.0     0.0    0.0
         6   4.8     0.0     .3    16.5    0.0     0.0    0.0
         7   4.9     0.0     .3    16.5    0.0     0.0    0.0
         8   4.3     0.0     .2    13.0    0.0     0.0    0.0
         9   4.4     0.0     .2    13.5    0.0     0.0    0.0
        10   5.0     0.0     .3    18.0    0.0     0.0    0.0
        11   4.9     0.0     .3    17.0    0.0     0.0    0.0
        12   5.2     0.0     .2    14.0    0.0     0.0    0.0
        13   5.4     0.0     .4    21.5    0.0     0.0    0.0
        14   4.8     0.0     .3    10.0    0.0     0.0    0.0
        15   5.2     0.0     .4    18.0    0.0     0.0    0.0
        16   5.4     0.0     .3    18.5    0.0     0.0    0.0
        17   5.0     0.0     .3    15.0    0.0     0.0    0.0
        18   4.7     0.0     .2    11.5    0.0     0.0    0.0
        19   4.8     0.0     .2    11.0    0.0     0.0    0.0
        20   5.0     0.0     .2    12.5    0.0     0.0    0.0


     MEAN    4.8     0.0     .3    14.6    0.0     0.0    0.0

  STD DEV     .5     0.0     .1     3.5    0.0     0.0    0.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
  AGROPYRON SMITHII      STUDY AREA HORSE CK.           DATE 29 JUNE       1982
  --------------------              -----------              ------------------


         PLANT  PHENOLOGICAL  MAX.   MAX.   MAX.   NOS.  NOS.
          NO.   STAGE  SCORE  LEAF   LEAF   SPIKE  SPK/  VEG.
                VEG.   REPR.  WIDTH  HGHT.  HGHT.  CULM  PLANT
********************************************************************************
           1    5.4    0.0     .3   21.0    0.0    0.0    0.0
           2    5.4    0.0     .3   17.0    0.0    0.0    0.0
           3    5.5    0.0     .4   23.0    0.0    0.0    0.0
           4    5.4    0.0     .4   16.0    0.0    0.0    0.0
           5    5.5    0.0     .4   25.5    0.0    0.0    0.0
           6    5.5    0.0     .5   22.0    0.0    0.0    0.0
           7    5.3    0.0     .3   16.5    0.0    0.0    0.0
           8    5.4    0.0     .3   17.0    0.0    0.0    0.0
           9    5.3    0.0     .3   15.0    0.0    0.0    0.0
          10    5.4    0.0     .3   20.0    0.0    0.0    0.0
          11    5.6    0.0     .4   25.5    0.0    0.0    0.0
          12    5.5    0.0     .4   18.0    0.0    0.0    0.0
          13    5.5    0.0     .4   26.0    0.0    0.0    0.0
          14    5.4    0.0     .3   16.0    0.0    0.0    0.0
          15    5.3    0.0     .5   21.0    0.0    0.0    0.0
          16    5.5    0.0     .4   16.5    0.0    0.0    0.0
          17    5.5    0.0     .4   18.0    0.0    0.0    0.0
          18    5.0    0.0     .4   11.5    0.0    0.0    0.0
          19    5.4    0.0     .3   15.0    0.0    0.0    0.0
          20    5.4    0.0     .3   20.0    0.0    0.0    0.0


       MEAN     5.4    0.0     .4   19.0    0.0    0.0    0.0

    STD DEV      .1    0.0     .1    4.0    0.0    0.0    0.0

    0.0 = NOT RECORDED

    MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII       STUDY AREA HORSE CK.          DATE  9 JULY       1982
------------------                 ---------                ----------------

       PLANT  PHENOLOGICAL  MAX.    MAX.    MAX.    NOS.   NOS.
        NO.   STAGE  SCORE  LEAF    LEAF    SPIKE   SPK/   VEG.
              VEG.   REPR.  WIDTH   HGHT.   HGHT.   CULM   PLANT
**********************************************************************
          1   6.0    0.0      .3    13.0    0.0     0.0    0.0
          2   6.0    0.0      .3    19.0    0.0     0.0    0.0
          3   6.0    0.0      .2    14.0    0.0     0.0    0.0
          4   6.0    0.0      .2    15.0    0.0     0.0    0.0
          5   6.0    0.0      .2    16.0    0.0     0.0    0.0
          6   6.0    0.0      .2    17.0    0.0     0.0    0.0
          7   6.0    0.0      .2    18.0    0.0     0.0    0.0
          8   6.2    0.0      .2    14.0    0.0     0.0    0.0
          9   6.0    0.0      .2    14.0    0.0     0.0    0.0
         10   6.0    0.0      .3    17.5    0.0     0.0    0.0
         11   6.1    0.0      .2    17.5    0.0     0.0    0.0
         12   6.0    0.0      .3    15.5    0.0     0.0    0.0
         13   6.0    0.0      .3    17.0    0.0     0.0    0.0
         14   6.0    0.0      .2    12.0    0.0     0.0    0.0
         15   6.1    0.0      .2    17.0    0.0     0.0    0.0
         16   6.1    0.0      .2    18.0    0.0     0.0    0.0
         17   6.1    0.0      .3    19.0    0.0     0.0    0.0
         18   6.2    0.0      .3    14.5    0.0     0.0    0.0
         19   6.0    0.0      .3    15.0    0.0     0.0    0.0
         20   6.0    0.0      .2    12.0    0.0     0.0    0.0


      MEAN    6.0    0.0      .2    15.8    0.0     0.0    0.0

   STD DEV     .1    0.0      .1     2.2    0.0     0.0    0.0

   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
```

AGROPYRON SMITHII   STUDY AREA HORSE CK.   DATE 26 JULY   1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.2	0.0	.2	14.0	0.0	0.0	0.0
2	6.1	0.0	.2	16.5	0.0	0.0	0.0
3	6.1	0.0	.2	12.5	0.0	0.0	0.0
4	6.2	0.0	.1	15.0	0.0	0.0	0.0
5	6.2	0.0	.1	16.0	0.0	0.0	0.0
6	6.2	0.0	.2	16.5	0.0	0.0	0.0
7	6.2	0.0	.2	18.0	0.0	0.0	0.0
8	6.1	0.0	.3	24.0	0.0	0.0	0.0
9	6.2	0.0	.1	13.5	0.0	0.0	0.0
10	6.2	0.0	.1	18.5	0.0	0.0	0.0
11	6.2	0.0	.2	16.0	0.0	0.0	0.0
12	6.2	0.0	.2	15.0	0.0	0.0	0.0
13	6.2	0.0	.2	26.0	0.0	0.0	0.0
14	6.2	0.0	.3	21.5	0.0	0.0	0.0
15	6.2	0.0	.2	17.5	0.0	0.0	0.0
16	6.1	0.0	.2	17.0	0.0	0.0	0.0
17	6.2	0.0	.3	19.0	0.0	0.0	0.0
18	6.3	0.0	.1	15.0	0.0	0.0	0.0
19	6.2	0.0	.2	14.5	0.0	0.0	0.0
20	6.2	0.0	.2	16.0	0.0	0.0	0.0
MEAN	6.2	0.0	.2	17.1	0.0	0.0	0.0
STD DEV	.0	0.0	.1	3.4	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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  AGROPYRON SMITHII      STUDY AREA HORSE CK.           DATE  9 AUGUST    1982
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         PLANT  PHENOLOGICAL  MAX.   MAX.   MAX.   NOS.  NOS.
          NO.   STAGE  SCORE  LEAF   LEAF   SPIKE  SPK/  VEG.
                VEG.   REPR.  WIDTH  HGHT.  HGHT.  CULM  PLANT
********************************************************************************
           1    6.8    0.0    0.0    0.0    0.0    0.0    0.0
           2    6.5    0.0    0.0    0.0    0.0    0.0    0.0
           3    6.5    0.0    0.0    0.0    0.0    0.0    0.0
           4    6.7    0.0    0.0    0.0    0.0    0.0    0.0
           5    6.7    0.0    0.0    0.0    0.0    0.0    0.0
           6    6.8    0.0    0.0    0.0    0.0    0.0    0.0
           7    6.8    0.0    0.0    0.0    0.0    0.0    0.0
           8    6.4    0.0    0.0    0.0    0.0    0.0    0.0
           9    6.8    0.0    0.0    0.0    0.0    0.0    0.0
          10    6.4    0.0    0.0    0.0    0.0    0.0    0.0
          11    6.3    0.0    0.0    0.0    0.0    0.0    0.0
          12    6.5    0.0    0.0    0.0    0.0    0.0    0.0
          13    6.5    0.0    0.0    0.0    0.0    0.0    0.0
          14    6.5    0.0    0.0    0.0    0.0    0.0    0.0
          15    6.5    0.0    0.0    0.0    0.0    0.0    0.0
          16    6.4    0.0    0.0    0.0    0.0    0.0    0.0
          17    6.3    0.0    0.0    0.0    0.0    0.0    0.0
          18    6.5    0.0    0.0    0.0    0.0    0.0    0.0
          19    6.3    0.0    0.0    0.0    0.0    0.0    0.0
          20    6.8    0.0    0.0    0.0    0.0    0.0    0.0


       MEAN     6.5    0.0    0.0    0.0    0.0    0.0    0.0

    STD DEV      .2    0.0    0.0    0.0    0.0    0.0    0.0

    0.0 = NOT RECORDED

    MEASUREMENTS IN CENTIMETERS
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 AGROPYRON SMITHII        STUDY AREA HORSE CK.          DATE 28 AUGUST     1982
 -----------------                   ---------              ----------------


       PLANT   PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.   NOS.
        NO.    STAGE  SCORE   LEAF    LEAF    SPIKE   SPK/   VEG.
               VEG.   REPR.   WIDTH   HGHT.   HGHT.   CULM   PLANT
***********************************************************************************
          1    6.5    0.0     0.0     0.0     0.0     0.0     0.0
          2    6.5    0.0     0.0     0.0     0.0     0.0     0.0
          3    6.5    0.0     0.0     0.0     0.0     0.0     0.0
          4    6.5    0.0     0.0     0.0     0.0     0.0     0.0
          5    6.8    0.0     0.0     0.0     0.0     0.0     0.0
          6    6.6    0.0     0.0     0.0     0.0     0.0     0.0
          7    6.8    0.0     0.0     0.0     0.0     0.0     0.0
          8    6.7    0.0     0.0     0.0     0.0     0.0     0.0
          9    6.6    0.0     0.0     0.0     0.0     0.0     0.0
         10    6.5    0.0     0.0     0.0     0.0     0.0     0.0
         11    8.0    0.0     0.0     0.0     0.0     0.0     0.0
         12    6.5    0.0     0.0     0.0     0.0     0.0     0.0
         13    6.5    0.0     0.0     0.0     0.0     0.0     0.0
         14    8.0    0.0     0.0     0.0     0.0     0.0     0.0
         15    6.5    0.0     0.0     0.0     0.0     0.0     0.0
         16    6.6    0.0     0.0     0.0     0.0     0.0     0.0
         17    6.5    0.0     0.0     0.0     0.0     0.0     0.0
         18    8.0    0.0     0.0     0.0     0.0     0.0     0.0
         19    6.7    0.0     0.0     0.0     0.0     0.0     0.0
         20    8.0    0.0     0.0     0.0     0.0     0.0     0.0


       MEAN    6.9    0.0     0.0     0.0     0.0     0.0     0.0

    STD DEV     .6    0.0     0.0     0.0     0.0     0.0     0.0


    0.0 = NOT RECORDED

    MEASUREMENTS IN CENTIMETERS
```

AGROPYRON SMITHII   STUDY AREA MESA ANT.   DATE 30 APRIL 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	3.2	0.0	.1	7.5	0.0	0.0	1.0
2	3.8	0.0	.1	7.5	0.0	0.0	1.0
3	3.8	0.0	.1	2.5	0.0	0.0	1.0
4	3.5	0.0	.2	12.0	0.0	0.0	1.0
5	3.1	0.0	.1	5.0	0.0	0.0	1.0
6	3.8	0.0	.1	7.0	0.0	0.0	2.0
7	3.0	0.0	.1	6.0	0.0	0.0	1.0
8	3.9	0.0	.1	3.0	0.0	0.0	2.0
9	3.5	0.0	.1	7.0	0.0	0.0	1.0
10	2.9	0.0	.1	5.0	0.0	0.0	1.0
11	2.9	0.0	.1	2.5	0.0	0.0	1.0
12	3.9	0.0	.1	6.0	0.0	0.0	1.0
13	2.9	0.0	.2	11.0	0.0	0.0	1.0
14	4.5	0.0	.2	9.0	0.0	0.0	3.0
15	3.9	0.0	.2	5.5	0.0	0.0	1.0
16	3.7	0.0	.1	6.5	0.0	0.0	2.0
17	3.3	0.0	.2	9.0	0.0	0.0	2.0
18	4.1	0.0	.2	7.5	0.0	0.0	1.0
19	3.9	0.0	.2	7.5	0.0	0.0	1.0
20	4.6	0.0	.2	5.5	0.0	0.0	1.0
MEAN	3.6	0.0	.1	6.6	0.0	0.0	1.3
STD DEV	.5	0.0	.1	2.5	0.0	0.0	.6

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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AGROPYRON SMITHII       STUDY AREA MESA ANT.            DATE 19 MAY         1982
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      PLANT  PHENOLOGICAL  MAX.   MAX.    MAX.   NOS.   NOS.
       NO.   STAGE  SCORE  LEAF   LEAF    SPIKE  SPK/   VEG.
             VEG.   REPR.  WIDTH  HGHT.   HGHT.  CULM   PLANT
*******************************************************************************
         1    4.2    0.0    .1    11.1    0.0    0.0    1.0
         2    4.2    0.0    .1     9.4    0.0    0.0    1.0
         3    4.8    0.0    .2    12.4    0.0    0.0    2.0
         4    4.0    0.0    .1    12.1    0.0    0.0    1.0
         5    4.4    0.0    .1     9.8    0.0    0.0    1.0
         6    3.8    0.0    .1    10.0    0.0    0.0    1.0
         7    4.2    0.0    .1    10.2    0.0    0.0    1.0
         8    4.2    0.0    .1    12.2    0.0    0.0    1.0
         9    4.0    0.0    .1     8.4    0.0    0.0    1.0
        10    3.8    0.0    .1     8.8    0.0    0.0    1.0
        11    3.8    0.0    .1    10.1    0.0    0.0    1.0
        12    4.6    0.0    .2    15.0    0.0    0.0    1.0
        13    3.8    0.0    .1    11.2    0.0    0.0    1.0
        14    4.9    0.0    .2    14.8    0.0    0.0    1.0
        15    4.2    0.0    .1     8.8    0.0    0.0    1.0
        16    4.4    0.0    .1     8.5    0.0    0.0    1.0
        17    5.0    0.0    .2    14.3    0.0    0.0    1.0
        18    4.6    0.0    .1     6.6    0.0    0.0    1.0
        19    4.2    0.0    .1     8.0    0.0    0.0    1.0
        20    4.8    0.0    .1    11.0    0.0    0.0    2.0


      MEAN    4.3    0.0    .1    10.6    0.0    0.0    1.1

   STD DEV     .4    0.0    .0     2.3    0.0    0.0     .3

   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII        STUDY AREA MESA ANT.           DATE  3 JUNE       1982
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      PLANT  PHENOLOGICAL  MAX.   MAX.   MAX.   NOS.  NOS.
       NO.   STAGE  SCORE  LEAF   LEAF   SPIKE  SPK/  VEG.
             VEG.   REPR.  WIDTH  HGHT.  HGHT.  CULM  PLANT
*******************************************************************************
        1    4.9    0.0     .2   14.0    0.0    0.0    0.0
        2    4.9    0.0     .2   10.0    0.0    0.0    0.0
        3    4.7    0.0     .3   11.0    0.0    0.0    0.0
        4    5.4    0.0     .3   21.0    0.0    0.0    0.0
        5    4.4    0.0     .2    9.5    0.0    0.0    0.0
        6    4.1    0.0     .2   17.0    0.0    0.0    0.0
        7    4.9    0.0     .2   15.0    0.0    0.0    0.0
        8    4.9    0.0     .2   12.0    0.0    0.0    0.0
        9    3.9    0.0     .1   11.5    0.0    0.0    0.0
       10    3.9    0.0     .2   12.5    0.0    0.0    0.0
       11    4.7    0.0     .1   11.0    0.0    0.0    0.0
       12    5.1    0.0     .2   11.5    0.0    0.0    0.0
       13    4.5    0.0     .2   17.0    0.0    0.0    0.0
       14    4.9    0.0     .2   20.0    0.0    0.0    0.0
       15    3.9    0.0     .1   14.0    0.0    0.0    0.0
       16    4.6    0.0     .2   12.0    0.0    0.0    0.0
       17    4.8    0.0     .2   15.5    0.0    0.0    0.0
       18    4.4    0.0     .2   12.0    0.0    0.0    0.0
       19    3.9    0.0     .1   11.5    0.0    0.0    0.0
       20    4.9    0.0     .2   15.0    0.0    0.0    0.0


    MEAN     4.6    0.0     .2   13.7    0.0    0.0    0.0

 STD DEV      .4    0.0     .1    3.2    0.0    0.0    0.0

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII   STUDY AREA MESA ANT.   DATE 15 JUNE   1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	5.2	0.0	.2	16.0	0.0	0.0	0.0
2	5.4	0.0	.2	12.0	0.0	0.0	0.0
3	5.1	0.0	.1	10.5	0.0	0.0	0.0
4	5.4	0.0	.3	24.0	0.0	0.0	0.0
5	5.3	0.0	.1	10.0	0.0	0.0	0.0
6	5.3	0.0	.2	18.0	0.0	0.0	0.0
7	5.4	0.0	.2	16.5	0.0	0.0	0.0
8	5.3	0.0	.2	13.5	0.0	0.0	0.0
9	5.3	0.0	.2	9.0	0.0	0.0	0.0
10	5.4	0.0	.1	13.0	0.0	0.0	0.0
11	5.4	0.0	.1	13.0	0.0	0.0	0.0
12	5.4	0.0	.1	8.0	0.0	0.0	0.0
13	5.2	0.0	.1	14.5	0.0	0.0	0.0
14	5.3	0.0	.2	16.0	0.0	0.0	0.0
15	5.3	0.0	.1	12.5	0.0	0.0	0.0
16	5.4	0.0	.2	10.5	0.0	0.0	0.0
17	5.3	0.0	.2	19.5	0.0	0.0	0.0
18	5.4	0.0	.2	12.5	0.0	0.0	0.0
19	5.4	0.0	.2	15.5	0.0	0.0	0.0
20	5.4	0.0	.2	16.0	0.0	0.0	0.0
MEAN	5.3	0.0	.2	14.0	0.0	0.0	0.0
STD DEV	.1	0.0	.1	3.8	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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AGROPYRON SMITHII        STUDY AREA MESA ANT.           DATE 30 JUNE       1982,
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      PLANT  PHENOLOGICAL  MAX.    MAX.    MAX.    NOS.   NOS.
       NO.   STAGE  SCORE  LEAF    LEAF    SPIKE   SPK/   VEG.
             VEG.   REPR.  WIDTH   HGHT.   HGHT.   CULM   PLANT
*******************************************************************************
         1   4.9    0.0     .2     14.5    0.0     0.0    0.0
         2   6.0    0.0     .2     13.0    0.0     0.0    0.0
         3   6.0    0.0     .2     20.0    0.0     0.0    0.0
         4   4.6    0.0     .3     25.5    0.0     0.0    0.0
         5   4.2    0.0     .1     11.5    0.0     0.0    0.0
         6   6.0    0.0     .2     13.5    0.0     0.0    0.0
         7   6.0    0.0     .1     10.0    0.0     0.0    0.0
         8   6.0    0.0     .2     13.0    0.0     0.0    0.0
         9   4.1    0.0     .2     11.5    0.0     0.0    0.0
        10   6.0    0.0     .1     12.5    0.0     0.0    0.0
        11   6.0    0.0     .2     14.0    0.0     0.0    0.0
        12   6.0    0.0     .1      9.0    0.0     0.0    0.0
        13   3.9    0.0     .2     16.0    0.0     0.0    0.0
        14   6.3    0.0     .2     20.0    0.0     0.0    0.0
        15   4.2    0.0     .2     15.5    0.0     0.0    0.0
        16   6.0    0.0     .3     11.0    0.0     0.0    0.0
        17   6.3    0.0     .2     15.0    0.0     0.0    0.0
        18   6.0    0.0     .2     16.5    0.0     0.0    0.0
        19   6.0    0.0     .2     15.0    0.0     0.0    0.0
        20   6.0    0.0     .2     11.5    0.0     0.0    0.0


      MEAN   5.5    0.0     .2     14.4    0.0     0.0    0.0

   STD DEV    .8    0.0     .1      3.9    0.0     0.0    0.0

   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII STUDY AREA MESA ANT. DATE 10 JULY 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.3	0.0	.1	14.0	0.0	0.0	0.0
2	6.2	0.0	.1	13.0	0.0	0.0	0.0
3	6.2	0.0	.1	11.0	0.0	0.0	0.0
4	6.4	0.0	.3	25.0	0.0	0.0	0.0
5	6.1	0.0	.2	11.0	0.0	0.0	0.0
6	6.3	0.0	.2	17.0	0.0	0.0	0.0
7	6.2	0.0	.2	17.0	0.0	0.0	0.0
8	6.3	0.0	.2	14.0	0.0	0.0	0.0
9	6.4	0.0	.2	14.5	0.0	0.0	0.0
10	6.2	0.0	.2	13.0	0.0	0.0	0.0
11	6.1	0.0	.2	11.0	0.0	0.0	0.0
12	6.2	0.0	.1	8.0	0.0	0.0	0.0
13	6.1	0.0	.2	15.5	0.0	0.0	0.0
14	6.4	0.0	.2	19.0	0.0	0.0	0.0
15	6.2	0.0	.1	11.5	0.0	0.0	0.0
16	6.2	0.0	.2	11.5	0.0	0.0	0.0
17	6.4	0.0	.2	19.0	0.0	0.0	0.0
18	6.3	0.0	.2	12.0	0.0	0.0	0.0
19	6.3	0.0	.2	12.0	0.0	0.0	0.0
20	6.3	0.0	.2	14.0	0.0	0.0	0.0
MEAN	6.3	0.0	.2	14.2	0.0	0.0	0.0
STD DEV	.1	0.0	.1	3.8	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII STUDY AREA MESA ANT. DATE 27 JULY 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.2	0.0	.2	17.5	0.0	0.0	0.0
2	6.3	0.0	.2	16.0	0.0	0.0	0.0
3	6.4	0.0	.1	12.0	0.0	0.0	0.0
4	6.3	0.0	.3	26.0	0.0	0.0	0.0
5	6.2	0.0	.2	12.0	0.0	0.0	0.0
6	6.4	0.0	.2	20.0	0.0	0.0	0.0
7	6.3	0.0	.3	17.0	0.0	0.0	0.0
8	6.4	0.0	.2	15.0	0.0	0.0	0.0
9	6.4	0.0	.2	12.0	0.0	0.0	0.0
10	6.4	0.0	.2	14.0	0.0	0.0	0.0
11	6.2	0.0	.2	14.0	0.0	0.0	0.0
12	6.7	0.0	.1	8.5	0.0	0.0	0.0
13	6.2	0.0	.2	25.0	0.0	0.0	0.0
14	6.3	0.0	.2	20.0	0.0	0.0	0.0
15	6.3	0.0	.1	13.0	0.0	0.0	0.0
16	6.4	0.0	.3	12.0	0.0	0.0	0.0
17	6.4	0.0	.3	21.0	0.0	0.0	0.0
18	6.2	0.0	.3	18.5	0.0	0.0	0.0
19	6.3	0.0	.2	15.5	0.0	0.0	0.0
20	6.2	0.0	.3	15.5	0.0	0.0	0.0
MEAN	6.3	0.0	.2	16.2	0.0	0.0	0.0
STD DEV	.1	0.0	.1	4.5	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII   STUDY AREA MESA ANT.   DATE 9 AUGUST 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.5	0.0	0.0	0.0	0.0	0.0	0.0
2	6.3	0.0	0.0	0.0	0.0	0.0	0.0
3	6.6	0.0	0.0	0.0	0.0	0.0	0.0
4	6.3	0.0	0.0	0.0	0.0	0.0	0.0
5	6.3	0.0	0.0	0.0	0.0	0.0	0.0
6	6.4	0.0	0.0	0.0	0.0	0.0	0.0
7	6.2	0.0	0.0	0.0	0.0	0.0	0.0
8	6.2	0.0	0.0	0.0	0.0	0.0	0.0
9	6.4	0.0	0.0	0.0	0.0	0.0	0.0
10	6.3	0.0	0.0	0.0	0.0	0.0	0.0
11	6.2	0.0	0.0	0.0	0.0	0.0	0.0
12	8.0	0.0	0.0	0.0	0.0	0.0	0.0
13	6.3	0.0	0.0	0.0	0.0	0.0	0.0
14	6.5	0.0	0.0	0.0	0.0	0.0	0.0
15	6.2	0.0	0.0	0.0	0.0	0.0	0.0
16	6.2	0.0	0.0	0.0	0.0	0.0	0.0
17	6.5	0.0	0.0	0.0	0.0	0.0	0.0
18	6.3	0.0	0.0	0.0	0.0	0.0	0.0
19	6.2	0.0	0.0	0.0	0.0	0.0	0.0
20	6.3	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	6.4	0.0	0.0	0.0	0.0	0.0	0.0
STD DEV	.4	0.0	0.0	0.0	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII STUDY AREA OWL DRAW DATE 1 MAY 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	4.4	0.0	0.0	6.0	0.0	0.0	0.0
2	4.5	0.0	0.0	8.0	0.0	0.0	0.0
3	3.3	0.0	0.0	4.5	0.0	0.0	0.0
4	3.2	0.0	0.0	7.0	0.0	0.0	0.0
5	4.3	0.0	0.0	6.0	0.0	0.0	0.0
6	4.3	0.0	0.0	6.0	0.0	0.0	0.0
7	3.3	0.0	0.0	5.0	0.0	0.0	0.0
8	4.5	0.0	0.0	8.0	0.0	0.0	0.0
9	4.1	0.0	0.0	4.5	0.0	0.0	0.0
10	4.3	0.0	0.0	11.0	0.0	0.0	0.0
11	3.8	0.0	0.0	8.5	0.0	0.0	0.0
12	4.2	0.0	0.0	10.0	0.0	0.0	0.0
13	3.3	0.0	0.0	7.0	0.0	0.0	0.0
14	3.9	0.0	0.0	9.0	0.0	0.0	0.0
15	4.1	0.0	0.0	7.5	0.0	0.0	0.0
16	4.3	0.0	0.0	5.0	0.0	0.0	0.0
17	3.9	0.0	0.0	11.0	0.0	0.0	0.0
18	4.2	0.0	0.0	3.5	0.0	0.0	0.0
19	4.4	0.0	0.0	8.5	0.0	0.0	0.0
20	3.3	0.0	0.0	4.0	0.0	0.0	0.0
MEAN	4.0	0.0	0.0	7.0	0.0	0.0	0.0
STD DEV	.5	0.0	0.0	2.3	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

```
AGROPYRON SMITHII       STUDY AREA OWL DRAW            DATE 17 MAY        1982
-------------------                ----------                      -----------------


        PLANT   PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.   NOS.
         NO.    STAGE  SCORE   LEAF    LEAF    SPIKE   SPK/   VEG.
                VEG.   REPR.   WIDTH   HGHT.   HGHT.   CULM   PLANT
*****************************************************************************
          1     4.3    0.0      .2     10.0    0.0     0.0    1.0
          2     4.5    0.0      .2      9.5    0.0     0.0    1.0
          3     4.5    0.0      .3     12.0    0.0     0.0    1.0
          4     4.2    0.0      .3     14.0    0.0     0.0    1.0
          5     4.4    0.0      .2      8.5    0.0     0.0    1.0
          6     4.3    0.0      .4     13.0    0.0     0.0    1.0
          7     4.3    0.0      .2      9.5    0.0     0.0    1.0
          8     5.1    0.0      .3      5.0    0.0     0.0    1.0
          9     4.3    0.0      .4     17.0    0.0     0.0    1.0
         10     4.5    0.0      .3     12.0    0.0     0.0    1.0
         11     4.2    0.0      .3      8.5    0.0     0.0    1.0
         12     4.2    0.0      .2      8.5    0.0     0.0    1.0
         13     4.1    0.0      .2     12.5    0.0     0.0    1.0
         14     4.2    0.0      .3      8.0    0.0     0.0    1.0
         15     3.0    0.0      .2     10.0    0.0     0.0    1.0
         16     4.2    0.0      .2      9.0    0.0     0.0    1.0
         17     4.6    0.0      .4     20.0    0.0     0.0    0.0
         18     4.6    0.0      .3     12.0    0.0     0.0    0.0
         19     4.5    0.0      .3      8.5    0.0     0.0    0.0
         20     4.5    0.0      .3     10.5    0.0     0.0    0.0


       MEAN     4.3    0.0      .3     10.9    0.0     0.0    1.0

    STD DEV      .4    0.0      .1      3.4    0.0     0.0    0.0

    0.0 = NOT RECORDED

    MEASUREMENTS IN CENTIMETERS
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```
AGROPYRON SMITHII      STUDY AREA OWL DRAW         DATE  1 JUNE      1982
--------------------              ----------          -----------------


      PLANT  PHENOLOGICAL  MAX.   MAX.   MAX.   NOS.  NOS.
       NO.   STAGE  SCORE  LEAF   LEAF   SPIKE  SPK/  VEG.
             VEG.   REPR.  WIDTH  HGHT.  HGHT.  CULM  PLANT
*****************************************************************************
         1   5.0    0.0     .2    10.5   0.0    0.0   0.0
         2   5.3    0.0     .2    16.0   0.0    0.0   0.0
         3   5.4    0.0     .2    15.0   0.0    0.0   0.0
         4   4.9    0.0     .3    10.5   0.0    0.0   0.0
         5   5.2    0.0     .2    12.0   0.0    0.0   0.0
         6   5.2    0.0     .3    14.5   0.0    0.0   0.0
         7   5.1    0.0     .2    12.0   0.0    0.0   0.0
         8   5.2    0.0     .2     8.0   0.0    0.0   0.0
         9   5.4    0.0     .3    20.0   0.0    0.0   0.0
        10   5.0    0.0     .3    14.0   0.0    0.0   0.0
        11   5.0    0.0     .2    11.0   0.0    0.0   0.0
        12   4.9    0.0     .2     9.5   0.0    0.0   0.0
        13   4.8    0.0     .3    16.5   0.0    0.0   0.0
        14   4.9    0.0     .4    13.0   0.0    0.0   0.0
        15   4.9    0.0     .2    11.5   0.0    0.0   0.0
        16   5.3    0.0     .3     7.0   0.0    0.0   0.0
        17   5.4    0.0     .2    24.0   0.0    0.0   0.0
        18   4.9    0.0     .2    14.0   0.0    0.0   0.0
        19   5.0    0.0     .3    13.5   0.0    0.0   0.0
        20   4.6    0.0     .2    13.0   0.0    0.0   0.0


     MEAN    5.1    0.0     .2    13.3   0.0    0.0   0.0

  STD DEV     .2    0.0     .1     3.9   0.0    0.0   0.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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```
AGROPYRON SMITHII        STUDY AREA OWL DRAW             DATE 28 JUNE       1982
-----------------                   ----------                      ---------------


     PLANT  PHENOLOGICAL   MAX.   MAX.   MAX.   NOS.   NOS.
      NO.   STAGE  SCORE   LEAF   LEAF   SPIKE  SPK/   VEG.
            VEG.   REPR.   WIDTH  HGHT.  HGHT.  CULM   PLANT
******************************************************************************
       1    5.1    0.0     .2     10.5   0.0    0.0    0.0
       2    5.2    0.0     .1     11.5   0.0    0.0    0.0
       3    5.2    0.0     .2     19.0   0.0    0.0    0.0
       4    5.3    0.0     .2     13.0   0.0    0.0    0.0
       5    5.3    0.0     .2     14.0   0.0    0.0    0.0
       6    5.4    0.0     .4     15.0   0.0    0.0    0.0
       7    5.3    0.0     .2     13.0   0.0    0.0    0.0
       8    5.2    0.0     .2     12.0   0.0    0.0    0.0
       9    5.3    0.0     .1     18.0   0.0    0.0    0.0
      10    5.3    0.0     .3     17.0   0.0    0.0    0.0
      11    5.2    0.0     .2     12.5   0.0    0.0    0.0
      12    5.2    0.0     .2     12.0   0.0    0.0    0.0
      13    5.3    0.0     .3     14.5   0.0    0.0    0.0
      14    5.3    0.0     .3     16.0   0.0    0.0    0.0
      15    5.3    0.0     .2     13.0   0.0    0.0    0.0
      16    5.2    0.0     .2     11.0   0.0    0.0    0.0
      17    5.3    0.0     .2     19.5   0.0    0.0    0.0
      18    5.3    0.0     .2     18.5   0.0    0.0    0.0
      19    5.3    0.0     .3     12.0   0.0    0.0    0.0
      20    5.2    0.0     .2     13.0   0.0    0.0    0.0


    MEAN    5.3    0.0     .2     14.3   0.0    0.0    0.0

 STD DEV     .1    0.0     .1      2.8   0.0    0.0    0.0


 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII       STUDY AREA OWL DRAW          DATE 11 JULY      1982
-------------------                ----------             -----------------


       PLANT  PHENOLOGICAL  MAX.    MAX.    MAX.    NOS.   NOS.
        NO.   STAGE  SCORE  LEAF    LEAF    SPIKE   SPK/   VEG.
              VEG.   REPR.  WIDTH   HGHT.   HGHT.   CULM   PLANT
*****************************************************************************
          1    6.2    0.0     .3    11.0    0.0     0.0     0.0
          2    6.0    0.0     .1    12.0    0.0     0.0     0.0
          3    6.0    0.0     .1    19.0    0.0     0.0     0.0
          4    6.0    0.0     .1    13.0    0.0     0.0     0.0
          5    6.0    0.0     .2    11.0    0.0     0.0     0.0
          6    6.0    0.0     .2    14.0    0.0     0.0     0.0
          7    6.0    0.0     .1    12.0    0.0     0.0     0.0
          8    6.0    0.0     .2    12.5    0.0     0.0     0.0
          9    6.0    0.0     .1    15.0    0.0     0.0     0.0
         10    6.0    0.0     .2    15.0    0.0     0.0     0.0
         11    6.0    0.0     .2    12.0    0.0     0.0     0.0
         12    6.0    0.0     .2    11.0    0.0     0.0     0.0
         13    6.0    0.0     .3    16.0    0.0     0.0     0.0
         14    6.0    0.0     .3    16.0    0.0     0.0     0.0
         15    6.0    0.0     .1    13.0    0.0     0.0     0.0
         16    6.0    0.0     .1     5.0    0.0     0.0     0.0
         17    6.0    0.0     .1    17.0    0.0     0.0     0.0
         18    6.0    0.0     .2    18.0    0.0     0.0     0.0
         19    6.0    0.0     .1    19.0    0.0     0.0     0.0
         20    6.0    0.0     .2    13.0    0.0     0.0     0.0


       MEAN    6.0    0.0     .2    13.7    0.0     0.0     0.0

    STD DEV     .0    0.0     .1     3.3    0.0     0.0     0.0

    0.0 = NOT RECORDED

    MEASUREMENTS IN CENTIMETERS
```

```
AGROPYRON SMITHII        STUDY AREA OWL DRAW          DATE 10 AUGUST     1982
------------------                  ----------          -----------------


        PLANT   PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.   NOS.
         NO.    STAGE  SCORE   LEAF    LEAF    SPIKE   SPK/   VEG.
                VEG.   REPR.   WIDTH   HGHT.   HGHT.   CULM   PLANT
*****************************************************************************
           1    6.5    0.0     0.0     0.0     0.0     0.0     0.0
           2    6.5    0.0     0.0     0.0     0.0     0.0     0.0
           3    6.3    0.0     0.0     0.0     0.0     0.0     0.0
           4    6.3    0.0     0.0     0.0     0.0     0.0     0.0
           5    6.5    0.0     0.0     0.0     0.0     0.0     0.0
           6    6.2    0.0     0.0     0.0     0.0     0.0     0.0
           7    6.2    0.0     0.0     0.0     0.0     0.0     0.0
           8    6.3    0.0     0.0     0.0     0.0     0.0     0.0
           9    6.3    0.0     0.0     0.0     0.0     0.0     0.0
          10    6.5    0.0     0.0     0.0     0.0     0.0     0.0
          11    6.3    0.0     0.0     0.0     0.0     0.0     0.0
          12    6.3    0.0     0.0     0.0     0.0     0.0     0.0
          13    6.4    0.0     0.0     0.0     0.0     0.0     0.0
          14    6.2    0.0     0.0     0.0     0.0     0.0     0.0
          15    6.2    0.0     0.0     0.0     0.0     0.0     0.0
          16    6.5    0.0     0.0     0.0     0.0     0.0     0.0
          17    6.5    0.0     0.0     0.0     0.0     0.0     0.0
          18    6.5    0.0     0.0     0.0     0.0     0.0     0.0
          19    6.2    0.0     0.0     0.0     0.0     0.0     0.0
          20    6.3    0.0     0.0     0.0     0.0     0.0     0.0


        MEAN    6.4    0.0     0.0     0.0     0.0     0.0     0.0

     STD DEV     .1    0.0     0.0     0.0     0.0     0.0     0.0

     0.0 = NOT RECORDED

     MEASUREMENTS IN CENTIMETERS
```

```
AGROPYRON SMITHII        STUDY AREA OWL DRAW            DATE 27 AUGUST    1982
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        PLANT  PHENOLOGICAL  MAX.   MAX.   MAX.   NOS.  NOS.
         NO.   STAGE  SCORE  LEAF   LEAF   SPIKE  SPK/  VEG.
               VEG.   REPR.  WIDTH  HGHT.  HGHT.  CULM  PLANT
*****************************************************************************
          1    6.7    0.0    0.0    0.0    0.0    0.0   0.0
          2    6.5    0.0    0.0    0.0    0.0    0.0   0.0
          3    6.3    0.0    0.0    0.0    0.0    0.0   0.0
          4    6.2    0.0    0.0    0.0    0.0    0.0   0.0
          5    6.5    0.0    0.0    0.0    0.0    0.0   0.0
          6    6.3    0.0    0.0    0.0    0.0    0.0   0.0
          7    6.3    0.0    0.0    0.0    0.0    0.0   0.0
          8    6.3    0.0    0.0    0.0    0.0    0.0   0.0
          9    6.6    0.0    0.0    0.0    0.0    0.0   0.0
         10    6.5    0.0    0.0    0.0    0.0    0.0   0.0
         11    6.4    0.0    0.0    0.0    0.0    0.0   0.0
         12    6.6    0.0    0.0    0.0    0.0    0.0   0.0
         13    6.7    0.0    0.0    0.0    0.0    0.0   0.0
         14    6.4    0.0    0.0    0.0    0.0    0.0   0.0
         15    6.4    0.0    0.0    0.0    0.0    0.0   0.0
         16    6.3    0.0    0.0    0.0    0.0    0.0   0.0
         17    6.5    0.0    0.0    0.0    0.0    0.0   0.0
         18    6.5    0.0    0.0    0.0    0.0    0.0   0.0
         19    6.5    0.0    0.0    0.0    0.0    0.0   0.0
         20    6.5    0.0    0.0    0.0    0.0    0.0   0.0


       MEAN    6.4    0.0    0.0    0.0    0.0    0.0   0.0

    STD DEV     .1    0.0    0.0    0.0    0.0    0.0   0.0

    0.C = NOT RECORDED

    MEASUREMENTS IN CENTIMETERS
```

AGROPYRON SMITHII   STUDY AREA RED WASH 2   DATE 29 APRIL   1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	3.0	0.0	.1	6.5	0.0	0.0	1.0
2	3.0	0.0	.1	8.5	0.0	0.0	2.0
3	3.0	0.0	.1	2.0	0.0	0.0	1.0
4	3.0	0.0	.1	7.5	0.0	0.0	1.0
5	2.0	0.0	.1	4.0	0.0	0.0	1.0
6	3.0	0.0	.1	6.0	0.0	0.0	1.0
7	2.2	0.0	.1	9.0	0.0	0.0	1.0
8	4.2	0.0	.1	7.0	0.0	0.0	1.0
9	3.1	0.0	.1	4.0	0.0	0.0	1.0
10	2.0	0.0	.1	6.5	0.0	0.0	1.0
11	3.0	0.0	.1	8.0	0.0	0.0	3.0
12	3.0	0.0	.1	7.0	0.0	0.0	2.0
13	1.0	0.0	.1	0.0	0.0	0.0	0.0
14	2.5	0.0	.1	4.0	0.0	0.0	1.0
15	3.0	0.0	.1	2.0	0.0	0.0	1.0
16	4.0	0.0	.2	6.5	0.0	0.0	1.0
17	3.0	0.0	.1	9.0	0.0	0.0	1.0
18	3.0	0.0	.1	3.0	0.0	0.0	1.0
19	2.9	0.0	.1	6.0	0.0	0.0	1.0
20	2.6	0.0	.1	7.0	0.0	0.0	1.0
MEAN	2.8	0.0	.1	6.0	0.0	0.0	1.2
STD DEV	.7	0.0	.0	2.2	0.0	0.0	.5

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

```
AGROPYRON SMITHII       STUDY AREA RED WASH 2         DATE 20 MAY        1982
-------------------                ----------              ----------------


     PLANT  PHENOLOGICAL  MAX.   MAX.    MAX.   NOS.   NOS.
      NO.   STAGE  SCORE  LEAF   LEAF    SPIKE  SPK/   VEG.
            VEG.   REPR.  WIDTH  HGHT.   HGHT.  CULM   PLANT
********************************************************************************
        1    3.5    0.0     .1   14.2    0.0    0.0    1.0
        2    3.0    0.0     .1   21.6    0.0    0.0    4.0
        3    3.0    0.0     .1   11.0    0.0    0.0    1.0
        4    3.3    0.0     .1   10.8    0.0    0.0    1.0
        5    3.6    0.0     .1   11.3    0.0    0.0    1.0
        6    3.2    0.0     .1   13.9    0.0    0.0    4.0
        7    3.8    0.0     .1    9.6    0.0    0.0    2.0
        8    3.3    0.0     .1   14.3    0.0    0.0    2.0
        9    3.5    0.0     .1   12.1    0.0    0.0    2.0
       10    3.0    0.0     .1   13.4    0.0    0.0    2.0
       11    3.0    0.0     .1   12.1    0.0    0.0    4.0
       12    3.0    0.0     .1    9.3    0.0    0.0    1.0
       13    3.0    0.0     .1    6.1    0.0    0.0    1.0
       14    2.9    0.0     .1    5.1    0.0    0.0    1.0
       15    3.0    0.0     .1    4.0    0.0    0.0    1.0
       16    3.0    0.0     .1   11.4    0.0    0.0    1.0
       17    3.1    0.0     .1   11.3    0.0    0.0    3.0
       18    2.8    0.0     .1    8.0    0.0    0.0    2.0
       19    3.3    0.0     .1    7.6    0.0    0.0    2.0
       20    3.3    0.0     .1   11.7    0.0    0.0    3.0


   MEAN      3.2    0.0     .1   10.9    0.0    0.0    2.0

 STD DEV      .3    0.0     .0    3.9    0.0    0.0    1.1

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
```

AGROPYRON SMITHII STUDY AREA RED WASH 2 DATE 02 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	4.8	0.0	.2	13.0	0.0	0.0	0.0
2	4.2	0.0	.1	25.0	0.0	0.0	0.0
3	4.9	0.0	.2	14.5	0.0	0.0	0.0
4	4.6	0.0	.2	12.0	0.0	0.0	0.0
5	4.4	0.0	.2	12.5	0.0	0.0	0.0
6	4.4	0.0	.3	21.0	0.0	0.0	0.0
7	4.8	0.0	.1	12.0	0.0	0.0	0.0
8	3.9	0.0	.2	18.5	0.0	0.0	0.0
9	4.9	0.0	.2	21.0	0.0	0.0	0.0
10	4.9	0.0	.2	14.0	0.0	0.0	0.0
11	4.5	0.0	.2	18.5	0.0	0.0	0.0
12	4.5	0.0	.2	12.0	0.0	0.0	0.0
13	4.8	0.0	.2	13.5	0.0	0.0	0.0
14	4.8	0.0	.2	10.0	0.0	0.0	0.0
15	4.8	0.0	.2	15.0	0.0	0.0	0.0
16	4.9	0.0	.2	12.5	0.0	0.0	0.0
17	3.7	0.0	.1	10.0	0.0	0.0	0.0
18	4.7	0.0	.1	10.0	0.0	0.0	0.0
19	4.8	0.0	.1	15.0	0.0	0.0	0.0
20	5.1	0.0	.2	14.0	0.0	0.0	0.0
MEAN	4.6	0.0	.2	14.7	0.0	0.0	0.0
STD DEV	.4	0.0	.1	4.1	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII　　STUDY AREA RED WASH 2　　DATE 14 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	4.6	0.0	.2	13.5	0.0	0.0	0.0
2	4.8	0.0	.2	15.6	0.0	0.0	0.0
3	4.3	0.0	.1	13.5	0.0	0.0	0.0
4	4.0	0.0	.1	11.0	0.0	0.0	0.0
5	4.7	0.0	.2	6.5	0.0	0.0	0.0
6	5.0	0.0	.2	16.5	0.0	0.0	0.0
7	4.4	0.0	.1	15.0	0.0	0.0	0.0
8	4.5	0.0	.2	12.0	0.0	0.0	0.0
9	4.6	0.0	.2	18.0	0.0	0.0	0.0
10	4.4	0.0	.2	13.5	0.0	0.0	0.0
11	4.7	0.0	.2	19.0	0.0	0.0	0.0
12	4.6	0.0	.2	17.5	0.0	0.0	0.0
13	5.0	9.0	.2	13.0	0.0	0.0	0.0
14	5.1	0.0	.2	11.5	0.0	0.0	0.0
15	4.3	0.0	.1	6.0	0.0	0.0	0.0
16	5.2	0.0	.2	12.7	0.0	0.0	0.0
17	4.8	0.0	.2	15.4	0.0	0.0	0.0
18	4.3	0.0	.2	10.0	0.0	0.0	0.0
19	4.9	0.0	.2	12.0	0.0	0.0	0.0
20	4.0	0.0	.1	6.3	0.0	0.0	0.0
MEAN	4.6	9.0	.2	12.9	0.0	0.0	0.0
STD DEV	.3	0.0	.0	3.7	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

```
AGROPYRON SMITHII        STUDY AREA RED WASH 2          DATE 28 JUNE      1982
------------------                  ---------                ---------------

          PLANT  PHENOLOGICAL  MAX.   MAX.   MAX.   NOS.  NOS.
           NO.   STAGE  SCORE  LEAF   LEAF   SPIKE  SPK/  VEG.
                 VEG.   REPR.  WIDTH  HGHT.  HGHT.  CULM  PLANT
********************************************************************************
             1   6.0    0.0     .1    15.0   0.0    0.0   0.0
             2   6.0    0.0     .1     9.0   0.0    0.0   0.0
             3   6.0    0.0     .1    16.5   0.0    0.0   0.0
             4   4.8    0.0     .2    15.5   0.0    0.0   0.0
             5   4.7    0.0     .1     8.0   0.0    0.0   0.0
             6   5.7    0.0     .2    18.0   0.0    0.0   0.0
             7   6.0    0.0     .1    15.0   0.0    0.0   0.0
             8   6.0    0.0     .2    17.0   0.0    0.0   0.0
             9   4.7    0.0     .2    19.0   0.0    0.0   0.0
            10   6.0    0.0     .2    14.0   0.0    0.0   0.0
            11   4.9    0.0     .2    20.0   0.0    0.0   0.0
            12   6.0    0.0     .2    20.0   0.0    0.0   0.0
            13   3.9    0.0     .1    14.0   0.0    0.0   0.0
            14   4.1    0.0     .1    11.0   0.0    0.0   0.0
            15   6.0    0.0     .2    13.5   0.0    0.0   0.0
            16   5.6    0.0     .2    16.0   0.0    0.0   0.0
            17   6.0    0.0     .1    15.0   0.0    0.0   0.0
            18   6.0    0.0     .1     9.0   0.0    0.0   0.0
            19   6.0    0.0     .2    12.0   0.0    0.0   0.0
            20   3.9    0.0     .1     6.5   0.0    0.0   0.0


          MEAN   5.4    0.0     .2    14.2   0.0    0.0   0.0

       STD DEV    .8    0.0     .1     3.9   0.0    0.0   0.0

       0.0 = NOT RECORDED

       MEASUREMENTS IN CENTIMETERS
```

AGROPYRON SMITHII   STUDY AREA RED WASH 2   DATE 11 JULY 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.3	0.0	.1	22.5	0.0	0.0	0.0
2	6.3	0.0	.1	23.0	0.0	0.0	0.0
3	6.3	0.0	.1	16.0	0.0	0.0	0.0
4	6.4	0.0	.1	15.5	0.0	0.0	0.0
5	6.3	0.0	.1	12.0	0.0	0.0	0.0
6	6.3	0.0	.2	27.5	0.0	0.0	0.0
7	6.2	0.0	.1	20.5	0.0	0.0	0.0
8	6.4	0.0	.2	20.0	0.0	0.0	0.0
9	6.3	0.0	.2	18.5	0.0	0.0	0.0
10	6.5	0.0	.2	19.0	0.0	0.0	0.0
11	6.2	0.0	.2	18.5	0.0	0.0	0.0
12	6.1	0.0	.1	14.0	0.0	0.0	0.0
13	6.2	0.0	.1	14.0	0.0	0.0	0.0
14	6.2	0.0	.1	11.0	0.0	0.0	0.0
15	6.2	0.0	.1	7.0	0.0	0.0	0.0
16	6.1	0.0	.1	11.0	0.0	0.0	0.0
17	6.3	0.0	.1	13.5	0.0	0.0	0.0
18	6.4	0.0	.1	14.0	0.0	0.0	0.0
19	6.2	0.0	.1	11.5	0.0	0.0	0.0
20	6.5	0.0	.1	7.5	0.0	0.0	0.0
MEAN	6.3	0.0	.1	15.8	0.0	0.0	0.0
STD DEV	.1	0.0	.0	5.3	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

```
AGROPYRON SMITHII        STUDY AREA RED WASH 2          DATE 25 JULY      1982
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      PLANT  PHENOLOGICAL  MAX.   MAX.    MAX.    NOS.   NOS.
       NO.   STAGE  SCORE  LEAF   LEAF    SPIKE   SPK/   VEG.
             VEG.   REPR.  WIDTH  HGHT.   HGHT.   CULM   PLANT
*******************************************************************************
          1   6.2    0.0     .2   16.0     0.0    0.0    0.0
          2   6.3    0.0     .2   26.0     0.0    0.0    0.0
          3   6.4    0.0     .1   15.5     0.0    0.0    0.0
          4   6.3    0.0     .2   20.0     0.0    0.0    0.0
          5   6.3    0.0     .1    9.0     0.0    0.0    0.0
          6   6.3    0.0     .2   17.0     0.0    0.0    0.0
          7   6.6    0.0     .1   15.0     0.0    0.0    0.0
          8   6.3    0.0     .2   16.5     0.0    0.0    0.0
          9   6.3    0.0     .2   17.5     0.0    0.0    0.0
         10   6.4    0.0     .2   13.5     0.0    0.0    0.0
         11   6.2    0.0     .2   19.0     0.0    0.0    0.0
         12   6.3    0.0     .2   20.0     0.0    0.0    0.0
         13   6.2    0.0     .2   10.0     0.0    0.0    0.0
         14   6.3    0.0     .1   10.5     0.0    0.0    0.0
         15   6.3    0.0     .1    7.0     0.0    0.0    0.0
         16   6.3    0.0     .2   11.0     0.0    0.0    0.0
         17   6.3    0.0     .2   15.0     0.0    0.0    0.0
         18   6.3    0.0     .2   10.5     0.0    0.0    0.0
         19   6.4    0.0     .2   13.0     0.0    0.0    0.0
         20   6.3    0.0     .2   12.0     0.0    0.0    0.0


       MEAN   6.3    0.0     .2   14.7     0.0    0.0    0.0

    STD DEV    .1    0.0     .0    4.6     0.0    0.0    0.0

    0.0 = NOT RECORDED

    MEASUREMENTS IN CENTIMETERS
```

AGROPYRON SMITHII   STUDY AREA RED WASH 2   DATE 10 AUGUST 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.4	0.0	0.0	0.0	0.0	0.0	0.0
2	6.6	0.0	0.0	0.0	0.0	0.0	0.0
3	6.4	0.0	0.0	0.0	0.0	0.0	0.0
4	6.4	0.0	0.0	0.0	0.0	0.0	0.0
5	6.5	0.0	0.0	0.0	0.0	0.0	0.0
6	6.3	0.0	0.0	0.0	0.0	0.0	0.0
7	6.4	0.0	0.0	0.0	0.0	0.0	0.0
8	6.4	0.0	0.0	0.0	0.0	0.0	0.0
9	6.4	0.0	0.0	0.0	0.0	0.0	0.0
10	6.3	0.0	0.0	0.0	0.0	0.0	0.0
11	6.4	0.0	0.0	0.0	0.0	0.0	0.0
12	6.4	0.0	0.0	0.0	0.0	0.0	0.0
13	6.4	0.0	0.0	0.0	0.0	0.0	0.0
14	6.3	0.0	0.0	0.0	0.0	0.0	0.0
15	6.4	0.0	0.0	0.0	0.0	0.0	0.0
16	6.4	0.0	0.0	0.0	0.0	0.0	0.0
17	6.5	0.0	0.0	0.0	0.0	0.0	0.0
18	6.4	0.0	0.0	0.0	0.0	0.0	0.0
19	6.3	0.0	0.0	0.0	0.0	0.0	0.0
20	8.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	6.5	0.0	0.0	0.0	0.0	0.0	0.0
STD DEV	.4	0.0	0.0	0.0	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

```
AGROPYRON SMITHII       STUDY AREA SHOSHONI 7          DATE 29 APRIL     1982
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       PLANT  PHENOLOGICAL  MAX.    MAX.    MAX.    NOS.   NOS.
        NO.   STAGE  SCORE  LEAF    LEAF    SPIKE   SPK/   VEG.
              VEG.   REPR.  WIDTH   HGHT.   HGHT.   CULM   PLANT
*******************************************************************************
          1   3.0    0.0    0.0     3.0     0.0     0.0    0.0
          2   1.9    0.0    0.0     0.0     0.0     0.0    0.0
          3   2.0    0.0    0.0     1.0     0.0     0.0    0.0
          4   2.0    0.0    0.0     1.0     0.0     0.0    0.0
          5   1.9    0.0    0.0     0.0     0.0     0.0    0.0
          6   3.0    0.0    0.0     2.5     0.0     0.0    0.0
          7   1.9    0.0    0.0     0.0     0.0     0.0    0.0
          8   4.0    0.0    0.0     2.3     0.0     0.0    0.0
          9   3.0    0.0    0.0     5.0     0.0     0.0    0.0
         10   2.0    0.0    0.0     1.0     0.0     0.0    0.0
         11   1.9    0.0    0.0     0.0     0.0     0.0    0.0
         12   3.3    0.0    0.0     5.5     0.0     0.0    0.0
         13   4.3    0.0    0.0     5.5     0.0     0.0    0.0
         14   3.0    0.0    0.0     3.5     0.0     0.0    0.0
         15   1.9    0.0    0.0     0.0     0.0     0.0    0.0
         16   1.9    0.0    0.0     0.0     0.0     0.0    0.0
         17   1.9    0.0    0.0     0.0     0.0     0.0    0.0
         18   3.3    0.0    0.0     5.5     0.0     0.0    0.0
         19   1.9    0.0    0.0     0.0     0.0     0.0    0.0
         20   4.5    0.0    0.0    12.0     0.0     0.0    0.0


      MEAN    2.6    0.0    0.0     4.0     0.0     0.0    0.0

   STD DEV     .9    0.0    0.0     3.1     0.0     0.0    0.0

   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
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  AGROPYRON SMITHII      STUDY AREA SHOSHONI 7          DATE 17 MAY       1982
  --------------------              ----------               -----------------


         PLANT  PHENOLOGICAL  MAX.   MAX.   MAX.   NOS.  NOS.
          NO.   STAGE  SCORE  LEAF   LEAF   SPIKE  SPK/  VEG.
                VEG.   REPR.  WIDTH  HGHT.  HGHT.  CULM  PLANT
********************************************************************************
           1    4.0    0.0     .1     4.0   0.0    0.0    1.0
           2    3.9    0.0     .1     4.5   0.0    0.0    1.0
           3    2.5    0.0     .3     5.5   0.0    0.0    1.0
           4    3.1    0.0     .1     3.5   0.0    0.0    1.0
           5    1.0    0.0    0.0     0.0   0.0    0.0    0.0
           6    4.2    0.0     .3     5.0   0.0    0.0    1.0
           7    2.3    0.0     .1     2.0   0.0    0.0    1.0
           8    3.8    0.0     .4    16.0   0.0    0.0    1.0
           9    3.5    0.0     .1     2.0   0.0    0.0    1.0
          10    2.5    0.0     .1     3.5   0.0    0.0    1.0
          11    1.0    0.0    0.0     0.0   0.0    0.0    1.0
          12    3.8    0.0     .3     8.0   0.0    0.0    1.0
          13    4.9    0.0     .4     8.0   0.0    0.0    1.0
          14    1.0    0.0    0.0     0.0   0.0    0.0    1.0
          15    3.8    0.0     .1     4.5   0.0    0.0    1.0
          16    3.9    0.0     .1     5.0   0.0    0.0    1.0
          17    4.9    0.0     .3     5.5   0.0    0.0    1.0
          18    4.9    0.0     .3     5.5   0.0    0.0    1.0
          19    3.2    0.0     .2     5.0   0.0    0.0    1.0
          20    4.3    0.0     .3     6.0   0.0    0.0    1.0


       MEAN     3.3    0.0     .2     5.5   0.0    0.0    1.0

    STD DEV     1.2    0.0     .1     3.2   0.0    0.0    0.0

    0.0 = NOT RECORDED

    MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII      STUDY AREA SHOSHONI 7         DATE 01 JUNE      1982
-------------------               ----------               ----------------


      PLANT  PHENOLOGICAL  MAX.   MAX.   MAX.   NOS.  NOS.
       NO.   STAGE  SCORE  LEAF   LEAF   SPIKE  SPK/  VEG.
             VEG.   REPR.  WIDTH  HGHT.  HGHT.  CULM  PLANT
*******************************************************************************
        1    3.7    0.0     .2     5.5   0.0    0.0    0.0
        2    3.7    0.0     .2     9.0   0.0    0.0    0.0
        3    3.8    0.0     .2     8.0   0.0    0.0    0.0
        4    3.8    0.0     .1     4.0   0.0    0.0    0.0
        5    3.7    0.0     .3    12.0   0.0    0.0    0.0
        6    3.7    0.0     .3    10.5   0.0    0.0    0.0
        7    3.8    0.0     .1     3.0   0.0    0.0    0.0
        8    4.5    0.0     .4    16.0   0.0    0.0    0.0
        9    3.6    0.0     .2     5.0   0.0    0.0    0.0
       10    3.6    0.0     .2     7.0   0.0    0.0    0.0
       11    3.9    0.0     .2     9.0   0.0    0.0    0.0
       12    3.5    0.0     .2     9.5   0.0    0.0    0.0
       13    4.8    0.0     .3    10.0   0.0    0.0    0.0
       14    3.7    0.0     .2     6.0   0.0    0.0    0.0
       15    3.8    0.0     .2    10.0   0.0    0.0    0.0
       16    3.9    0.0     .2     6.0   0.0    0.0    0.0
       17    4.7    0.0     .3     8.0   0.0    0.0    0.0
       18    3.8    0.0     .2     9.0   0.0    0.0    0.0
       19    3.5    0.0     .2    13.0   0.0    0.0    0.0
       20    3.8    0.0     .3    15.0   0.0    0.0    0.0


     MEAN    3.9    0.0     .2     8.8   0.0    0.0    0.0

  STD DEV     .4    0.0     .1     3.5   0.0    0.0    0.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
```

AGROPYRON SMITHII STUDY AREA SHOSHONI 7 DATE 16 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	3.5	0.0	.2	10.0	0.0	0.0	0.0
2	3.3	0.0	.1	8.0	0.0	0.0	0.0
3	3.8	0.0	.3	11.0	0.0	0.0	0.0
4	4.1	0.0	.2	6.5	0.0	0.0	0.0
5	4.3	0.0	.3	13.0	0.0	0.0	0.0
6	3.1	0.0	.3	11.0	0.0	0.0	0.0
7	4.2	0.0	.1	3.5	0.0	0.0	0.0
8	3.9	0.0	.5	17.0	0.0	0.0	0.0
9	3.3	0.0	.2	5.5	0.0	0.0	0.0
10	3.6	0.0	.2	10.0	0.0	0.0	0.0
11	3.3	0.0	.3	8.5	0.0	0.0	0.0
12	3.9	0.0	.2	9.5	0.0	0.0	0.0
13	4.5	0.0	.4	14.0	0.0	0.0	0.0
14	4.1	0.0	.1	4.0	0.0	0.0	0.0
15	4.2	0.0	.2	11.0	0.0	0.0	0.0
16	4.6	0.0	.2	7.5	0.0	0.0	0.0
17	4.5	0.0	.3	9.3	0.0	0.0	0.0
18	4.4	0.0	.3	8.0	0.0	0.0	0.0
19	4.5	0.0	.2	5.5	0.0	0.0	0.0
20	4.8	0.0	.3	12.5	0.0	0.0	0.0
MEAN	4.0	0.0	.2	9.3	0.0	0.0	0.0
STD DEV	.5	0.0	.1	3.4	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII   STUDY AREA SHOSHONI 7   DATE 28 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/CULM	NOS. VEG. PLANT
1	4.8	0.0	.2	12.0	0.0	0.0	0.0
2	4.7	0.0	.2	7.5	0.0	0.0	0.0
3	4.9	0.0	.3	13.5	0.0	0.0	0.0
4	4.8	0.0	.2	8.5	0.0	0.0	0.0
5	5.2	0.0	.3	16.3	0.0	0.0	0.0
6	5.0	0.0	.4	15.0	0.0	0.0	0.0
7	4.7	0.0	.1	5.0	0.0	0.0	0.0
8	4.7	0.0	.2	6.0	0.0	0.0	0.0
9	4.7	0.0	.2	8.5	0.0	0.0	0.0
10	4.8	0.0	.2	11.0	0.0	0.0	0.0
11	4.9	0.0	.3	12.0	0.0	0.0	0.0
12	4.8	0.0	.3	13.5	0.0	0.0	0.0
13	5.3	0.0	.4	17.5	0.0	0.0	0.0
14	4.6	0.0	.1	9.5	0.0	0.0	0.0
15	4.8	0.0	.2	15.5	0.0	0.0	0.0
16	4.9	0.0	.3	12.5	0.0	0.0	0.0
17	5.3	0.0	.4	14.0	0.0	0.0	0.0
18	5.2	0.0	.3	13.5	0.0	0.0	0.0
19	4.7	0.0	.1	8.0	0.0	0.0	0.0
20	5.4	0.0	.4	16.5	0.0	0.0	0.0
MEAN	4.9	0.0	.3	11.8	0.0	0.0	0.0
STD DEV	.2	0.0	.1	3.7	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII   STUDY AREA SHOSHONI 7   DATE 10 JULY   1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.0	0.0	.2	12.0	0.0	0.0	0.0
2	6.0	0.0	.1	15.0	0.0	0.0	0.0
3	6.0	0.0	.2	14.5	0.0	0.0	0.0
4	4.7	0.0	.2	9.0	0.0	0.0	0.0
5	6.0	0.0	.3	17.0	0.0	0.0	0.0
6	6.0	0.0	.3	19.0	0.0	0.0	0.0
7	6.0	0.0	.2	11.0	0.0	0.0	0.0
8	6.0	0.0	.3	21.0	0.0	0.0	0.0
9	4.7	0.0	.1	10.0	0.0	0.0	0.0
10	4.9	0.0	.3	10.0	0.0	0.0	0.0
11	6.0	0.0	.3	13.0	0.0	0.0	0.0
12	6.0	0.0	.2	13.0	0.0	0.0	0.0
13	6.0	0.0	.3	20.0	0.0	0.0	0.0
14	6.0	0.0	.1	10.0	0.0	0.0	0.0
15	4.7	0.0	.3	15.0	0.0	0.0	0.0
16	6.0	0.0	.2	14.0	0.0	0.0	0.0
17	6.0	0.0	.2	14.0	0.0	0.0	0.0
18	4.7	0.0	.3	12.0	0.0	0.0	0.0
19	6.0	0.0	.1	7.0	0.0	0.0	0.0
20	6.2	0.0	.2	16.5	0.0	0.0	0.0
MEAN	5.7	0.0	.2	13.7	0.0	0.0	0.0
STD DEV	.6	0.0	.1	3.7	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

```
AGROPYRON SMITHII        STUDY AREA SHOSHONI 7           DATE 25 JULY       1982
-------------------                 ----------          -----------------


       PLANT  PHENOLOGICAL  MAX.    MAX.    MAX.    NOS.   NOS.
        NO.   STAGE  SCORE  LEAF    LEAF    SPIKE   SPK/   VEG.
              VEG.   REPR.  WIDTH  HGHT.   HGHT.   CULM   PLANT
***************************************************************************
         1    6.0    0.0     .2    11.0    0.0     0.0    0.0.
         2    6.1    0.0     .2     8.5    0.0     0.0    0.0
         3    6.2    0.0     .2    14.0    0.0     0.0    0.0
         4    6.2    C.0     .2     9.0    0.0     0.0    0.0
         5    6.1    0.0     .3    18.0    0.0     0.0    0.0
         6    6.2    0.0     .3    19.0    0.0     0.0    0.0
         7    6.1    0.0     .2    12.0    0.0     0.0    0.0
         8    6.1    0.0     .4    21.0    0.0     0.0    0.0
         9    6.2    0.0     .2    11.0    0.0     0.0    0.0
        10    6.1    0.0     .3    11.5    0.0     0.0    0.0
        11    6.1    0.0     .3    14.0    0.0     0.0    0.0
        12    6.1    0.0     .3    13.0    0.0     0.0    0.0
        13    6.1    0.0     .4    20.0    0.0     0.0    0.0
        14    6.2    0.0     .2    13.0    0.0     0.0    0.0
        15    6.2    0.0     .2    16.0    0.0     0.0    0.0
        16    6.2    0.0     .2    14.0    0.0     0.0    0.0
        17    6.1    0.0     .3    14.5    0.0     0.0    0.0
        18    6.0    0.0     .3    13.5    0.0     0.0    0.0
        19    6.3    0.0     .1     7.5    0.0     0.0    0.0
        20    6.2    0.0     .2    16.0    0.0     0.0    0.0


      MEAN    6.1    0.0     .3    13.8    0.0     0.0    0.0

   STD DEV     .1    0.0     .1     3.7    0.0     0.0    0.0

   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
```

```
AGROPYRON SMITHII      STUDY AREA SHOSHONI 7         DATE  8 AUGUST    1982
-------------------               ----------             -----------------


      PLANT  PHENOLOGICAL   MAX.   MAX.   MAX.   NOS.   NOS.
       NO.   STAGE  SCORE   LEAF   LEAF   SPIKE  SPK/   VEG.
             VEG.   REPR.   WIDTH  HGHT.  HGHT.  CULM   PLANT
**********************************************************************
        1    6.4    0.0     0.0    0.0    0.0    0.0    0.0
        2    6.1    0.0     0.0    0.0    0.0    0.0    0.0
        3    6.1    0.0     0.0    0.0    0.0    0.0    0.0
        4    6.5    0.0     0.0    0.0    0.0    0.0    0.0
        5    6.2    0.0     0.0    0.0    0.0    0.0    0.0
        6    6.8    0.0     0.0    0.0    0.0    0.0    0.0
        7    6.4    0.0     0.0    0.0    0.0    0.0    0.0
        8    6.3    0.0     0.0    0.0    0.0    0.0    0.0
        9    6.3    0.0     0.0    0.0    0.0    0.0    0.0
       10    6.1    0.0     0.0    0.0    0.0    0.0    0.0
       11    6.3    0.0     0.0    0.0    0.0    0.0    0.0
       12    6.3    0.0     0.0    0.0    0.0    0.0    0.0
       13    6.4    0.0     0.0    0.0    0.0    0.0    0.0
       14    6.1    0.0     0.0    0.0    0.0    0.0    0.0
       15    6.2    0.0     0.0    0.0    0.0    0.0    0.0
       16    6.2    0.0     0.0    0.0    0.0    0.0    0.0
       17    6.2    0.0     0.0    0.0    0.0    0.0    0.0
       18    6.3    0.0     0.0    0.0    0.0    0.0    0.0
       19    6.4    0.0     0.0    0.0    0.0    0.0    0.0
       20    6.3    0.0     0.0    0.0    0.0    0.0    0.0


     MEAN    6.3    0.0     0.0    0.0    0.0    0.0    0.0

  STD DEV     .2    0.0     0.0    0.0    0.0    0.0    0.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
```

```
AGROPYRON SMITHII       STUDY AREA SHOSHONI 7          DATE 28 AUGUST    1982
-------------------                ----------                   -----------------


       PLANT  PHENOLOGICAL  MAX.   MAX.   MAX.   NOS.  NOS.
        NO.   STAGE  SCORE  LEAF   LEAF   SPIKE  SPK/  VEG.
              VEG.   REPR.  WIDTH  HGHT.  HGHT.  CULM  PLANT
*****************************************************************************
         1    6.5    0.0    0.0    0.0    0.0    0.0    0.0
         2    6.5    0.0    0.0    0.0    0.0    0.0    0.0
         3    6.4    0.0    0.0    0.0    0.0    0.0    0.0
         4    6.4    0.0    0.0    0.0    0.0    0.0    0.0
         5    6.4    0.0    0.0    0.0    0.0    0.0    0.0
         6    6.5    0.0    0.0    0.0    0.0    0.0    0.0
         7    6.6    0.0    0.0    0.0    0.0    0.0    0.0
         8    6.7    0.0    0.0    0.0    0.0    0.0    0.0
         9    6.9    0.0    0.0    0.0    0.0    0.0    0.0
        10    6.4    0.0    0.0    0.0    0.0    0.0    0.0
        11    6.5    0.0    0.0    0.0    0.0    0.0    0.0
        12    6.5    0.0    0.0    0.0    0.0    0.0    0.0
        13    6.4    0.0    0.0    0.0    0.0    0.0    0.0
        14    6.3    0.0    0.0    0.0    0.0    0.0    0.0
        15    6.3    0.0    0.0    0.0    0.0    0.0    0.0
        16    6.8    0.0    0.0    0.0    0.0    0.0    0.0
        17    6.5    0.0    0.0    0.0    0.0    0.0    0.0
        18    6.5    0.0    0.0    0.0    0.0    0.0    0.0
        19    6.9    0.0    0.0    0.0    0.0    0.0    0.0
        20    6.6    0.0    0.0    0.0    0.0    0.0    0.0


      MEAN    6.5    0.0    0.0    0.0    0.0    0.0    0.0

   STD DEV     .2    0.0    0.0    0.0    0.0    0.0    0.0

   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
```

AGROPYRON SMITHII STUDY AREA SWEETWATER DATE 1 MAY 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	4.8	0.0	.3	9.0	0.0	0.0	2.0
2	3.8	0.0	.2	4.5	0.0	0.0	1.0
3	4.1	0.0	.2	10.0	0.0	0.0	1.0
4	3.6	0.0	.2	10.0	0.0	0.0	2.0
5	5.2	0.0	.2	9.0	0.0	0.0	1.0
6	2.9	0.0	.2	6.5	0.0	0.0	5.0
7	3.6	0.0	.2	5.0	0.0	0.0	2.0
8	3.4	0.0	.2	9.0	0.0	0.0	2.0
9	4.1	0.0	.1	4.5	0.0	0.0	1.0
10	2.9	0.0	.2	7.0	0.0	0.0	3.0
11	3.9	0.0	.2	9.0	0.0	0.0	2.0
12	3.9	0.0	.1	6.0	0.0	0.0	1.0
13	2.6	0.0	.2	6.5	0.0	0.0	1.0
14	3.9	0.0	.2	7.0	0.0	0.0	2.0
15	3.4	0.0	.3	7.0	0.0	0.0	3.0
16	3.7	0.0	.2	5.5	0.0	0.0	2.0
17	3.5	0.0	.1	4.5	0.0	0.0	2.0
18	3.5	0.0	.2	11.0	0.0	0.0	4.0
19	2.8	0.0	.1	5.0	0.0	0.0	1.0
20	2.9	0.0	.1	7.0	0.0	0.0	1.0
MEAN	3.6	0.0	.2	7.2	0.0	0.0	2.0
STD DEV	.6	0.0	.1	2.1	0.0	0.0	1.1

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

```
AGROPYRON SMITHII       STUDY AREA SWEETWATER          DATE 19 MAY         1982
-----------------                  ----------               ------------------


        PLANT   PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.   NOS.
         NO.    STAGE  SCORE   LEAF    LEAF    SPIKE   SPK/   VEG.
                VEG.   REPR.   WIDTH   HGHT.   HGHT.   CULM   PLANT
**************************************************************************
           1    4.9    0.0      .2     12.0    0.0     0.0     2.0
           2    3.9    0.0      .1     11.0    0.0     0.0     1.0
           3    4.9    0.0      .2     13.0    0.0     0.0     1.0
           4    3.5    0.0      .1      9.0    0.0     0.0     1.0
           5    5.4    0.0      .2     14.0    0.0     0.0     1.0
           6    3.9    0.0      .2     12.0    0.0     0.0     1.0
           7    3.7    0.0      .1      6.0    0.0     0.0     1.0
           8    3.6    0.0      .2     12.0    0.0     0.0     2.0
           9    3.4    0.0      .1     10.0    0.0     0.0     2.0
          10    3.2    0.0      .3     13.0    0.0     0.0     5.0
          11    4.9    0.0      .2      9.5    0.0     0.0     1.0
          12    4.5    0.0      .2      8.5    0.0     0.0     1.0
          13    4.5    0.0      .2     13.5    0.0     0.0     2.0
          14    4.6    0.0      .2     12.5    0.0     0.0     2.0
          15    3.5    0.0      .2     11.0    0.0     0.0     4.0
          16    4.8    0.0      .2      7.5    0.0     0.0     1.0
          17    4.6    0.0      .1      5.0    0.0     0.0     2.0
          18    3.9    0.0      .1     11.5    0.0     0.0     3.0
          19    3.9    0.0      .2     10.0    0.0     0.0     1.0
          20    4.9    0.0      .2     10.0    0.0     0.0     1.0


        MEAN    4.2    0.0      .2     10.6    0.0     0.0     1.8

     STD DEV     .6    0.0      .1      2.4    0.0     0.0     1.1


     0.0 = NOT RECORDED

     MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII   STUDY AREA SWEETWATER   DATE 4 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE		MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
	VEG.	REPR.					
1	5.1	0.0	.3	15.0	0.0	0.0	0.0
2	4.1	0.0	.2	9.5	0.0	0.0	0.0
3	3.2	0.0	.2	14.5	0.0	0.0	0.0
4	3.9	0.0	.2	18.0	0.0	0.0	0.0
5	5.4	0.0	.3	17.0	0.0	0.0	0.0
6	4.9	0.0	.3	17.0	0.0	0.0	0.0
7	4.9	0.0	.1	9.5	0.0	0.0	0.0
8	4.5	0.0	.2	14.0	0.0	0.0	0.0
9	4.3	0.0	.1	7.0	0.0	0.0	0.0
10	4.6	0.0	.2	17.5	0.0	0.0	0.0
11	4.1	0.0	.2	15.0	0.0	0.0	0.0
12	4.7	0.0	.2	10.0	0.0	0.0	0.0
13	4.9	0.0	.3	28.0	0.0	0.0	0.0
14	4.9	0.0	.2	11.0	0.0	0.0	0.0
15	4.6	0.0	.3	20.0	0.0	0.0	0.0
16	4.8	0.0	.3	13.5	0.0	0.0	0.0
17	4.8	0.0	.2	7.5	0.0	0.0	0.0
18	4.5	0.0	.2	14.0	0.0	0.0	0.0
19	4.7	0.0	.1	11.5	0.0	0.0	0.0
20	4.9	0.0	.3	15.0	0.0	0.0	0.0
MEAN	4.6	0.0	.2	14.2	0.0	0.0	0.0
STD DEV	.5	0.0	.1	4.8	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII   STUDY AREA SWEETWATER   DATE 17 JUNE   1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	5.0	0.0	.2	14.0	0.0	0.0	0.0
2	5.3	0.0	.2	9.5	0.0	0.0	0.0
3	5.4	0.0	.3	18.0	0.0	0.0	0.0
4	5.2	0.0	.3	16.3	0.0	0.0	0.0
5	5.2	0.0	.3	17.0	0.0	0.0	0.0
6	5.1	0.0	.2	15.0	0.0	0.0	0.0
7	5.2	0.0	.2	13.5	0.0	0.0	0.0
8	5.0	0.0	.2	9.0	0.0	0.0	0.0
9	5.2	0.0	.2	8.5	0.0	0.0	0.0
10	5.3	0.0	.2	18.0	0.0	0.0	0.0
11	5.3	0.0	.2	16.0	0.0	0.0	0.0
12	5.3	0.0	.2	11.5	0.0	0.0	0.0
13	5.4	0.0	.3	18.5	0.0	0.0	0.0
14	5.2	0.0	.2	10.5	0.0	0.0	0.0
15	5.2	0.0	.3	23.0	0.0	0.0	0.0
16	5.3	0.0	.3	16.0	0.0	0.0	0.0
17	5.0	0.0	.1	7.3	0.0	0.0	0.0
18	5.0	0.0	.1	7.0	0.0	0.0	0.0
19	5.2	0.0	.2	11.0	0.0	0.0	0.0
20	5.2	0.0	.2	9.5	0.0	0.0	0.0
MEAN	5.2	0.0	.2	13.5	0.0	0.0	0.0
STD DEV	.1	0.0	.1	4.4	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

```
AGROPYRON SMITHII      STUDY AREA SWEETWATER          DATE 28 JUNE       1982
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       PLANT  PHENOLOGICAL  MAX.   MAX.    MAX.   NOS.   NOS.
        NO.   STAGE  SCORE  LEAF   LEAF    SPIKE  SPK/   VEG.
              VEG.   REPR.  WIDTH  HGHT.   HGHT.  CULM   PLANT
*******************************************************************************************
          1   5.3    0.0     .3    16.5    0.0    0.0    0.0
          2   5.9    0.0     .3    10.5    0.0    0.0    0.0
          3   5.6    0.0     .3    20.0    0.0    0.0    0.0
          4   4.9    0.0     .3    18.0    0.0    0.0    0.0
          5   5.9    0.0     .3    19.0    0.0    0.0    0.0
          6   5.3    0.0     .3    20.0    0.0    0.0    0.0
          7   5.5    0.0     .2    15.0    0.0    0.0    0.0
          8   5.6    0.0     .2    15.0    0.0    0.0    0.0
          9   5.2    0.0     .3     6.0    0.0    0.0    0.0
         10   5.5    0.0     .3    19.5    0.0    0.0    0.0
         11   5.4    0.0     .1    15.0    0.0    0.0    0.0
         12   5.4    0.0     .1    12.5    0.0    0.0    0.0
         13   5.5    0.0     .2    25.0    0.0    0.0    0.0
         14   5.9    0.0     .1    11.0    0.0    0.0    0.0
         15   5.6    0.0     .2    25.5    0.0    0.0    0.0
         16   5.2    0.0     .2    17.0    0.0    0.0    0.0
         17   5.9    0.0     .1     7.5    0.0    0.0    0.0
         18   5.9    0.0     .2    16.0    0.0    0.0    0.0
         19   5.9    0.0     .2    13.0    0.0    0.0    0.0
         20   5.9    0.0     .2    18.0    0.0    0.0    0.0


       MEAN   5.6    0.0     .2    16.0    0.0    0.0    0.0

    STD DEV    .3    0.0     .1     5.1    0.0    0.0    0.0

    0.0 = NOT RECORDED

    MEASUREMENTS IN CENTIMETERS
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```
AGROPYRON SMITHII       STUDY AREA SWEETWATER          DATE 10 JULY       1982
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      PLANT  PHENOLOGICAL  MAX.   MAX.    MAX.   NOS.  NOS.
       NO.   STAGE  SCORE  LEAF   LEAF    SPIKE  SPK/  VEG.
             VEG.   REPR.  WIDTH  HGHT.   HGHT.  CULM  PLANT
*************************************************************************************
         1   6.0    0.0     .3    17.5    0.0    0.0    0.0
         2   6.6    0.0     .2    11.0    0.0    0.0    0.0
         3   6.5    0.0     .2    13.5    0.0    0.0    0.0
         4   6.2    0.0     .3    20.0    0.0    0.0    0.0
         5   6.1    0.0     .2    18.5    0.0    0.0    0.0
         6   6.2    0.0     .2    19.0    0.0    0.0    0.0
         7   6.1    0.0     .2    11.5    0.0    0.0    0.0
         8   6.3    0.0     .2    15.0    0.0    0.0    0.0
         9   6.1    0.0     .2    11.0    0.0    0.0    0.0
        10   6.2    0.0     .2    14.5    0.0    0.0    0.0
        11   6.1    0.0     .2    17.0    0.0    0.0    0.0
        12   6.2    0.0     .2    11.0    0.0    0.0    0.0
        13   6.1    0.0     .1    23.0    0.0    0.0    0.0
        14   6.6    0.0     .1    10.0    0.0    0.0    0.0
        15   6.2    0.0     .2    29.0    0.0    0.0    0.0
        16   6.1    0.0     .2    16.5    0.0    0.0    0.0
        17   6.5    0.0     .2     8.0    0.0    0.0    0.0
        18   6.3    0.0     .2    10.0    0.0    0.0    0.0
        19   6.1    0.0     .2    14.0    0.0    0.0    0.0
        20   6.3    0.0     .2    10.0    0.0    0.0    0.0


      MEAN   6.2    0.0     .2    15.0    0.0    0.0    0.0

   STD DEV    .2    0.0     .0     5.2    0.0    0.0    0.0

   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII STUDY AREA SWEETWATER DATE 25 JULY 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.5	0.0	.2	16.5	0.0	0.0	0.0
2	6.4	0.0	.2	15.5	0.0	0.0	0.0
3	6.4	0.0	.2	18.5	0.0	0.0	0.0
4	6.5	0.0	.2	18.5	0.0	0.0	0.0
5	6.3	0.0	.2	18.5	0.0	0.0	0.0
6	6.3	0.0	.2	19.5	0.0	0.0	0.0
7	6.4	0.0	.2	14.0	0.0	0.0	0.0
8	6.5	0.0	.2	14.5	0.0	0.0	0.0
9	6.3	0.0	.2	19.5	0.0	0.0	0.0
10	6.5	0.0	.2	18.0	0.0	0.0	0.0
11	6.4	0.0	.2	17.0	0.0	0.0	0.0
12	6.3	0.0	.2	14.0	0.0	0.0	0.0
13	6.3	0.0	.2	21.0	0.0	0.0	0.0
14	6.4	0.0	.2	11.0	0.0	0.0	0.0
15	6.5	0.0	.2	25.5	0.0	0.0	0.0
16	6.2	0.0	.2	18.0	0.0	0.0	0.0
17	6.1	0.0	.1	8.0	0.0	0.0	0.0
18	6.3	0.0	.2	13.0	0.0	0.0	0.0
19	6.2	0.0	.2	13.0	0.0	0.0	0.0
20	6.4	0.0	.2	18.0	0.0	0.0	0.0
MEAN	6.4	0.0	.2	16.6	0.0	0.0	0.0
STD DEV	.1	0.0	.0	3.9	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

```
AGROPYRON SMITHII        STUDY AREA SWEETWATER          DATE  6 AUGUST    1982
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      PLANT   PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.   NOS.
       NO.    STAGE  SCORE   LEAF    LEAF    SPIKE   SPK/   VEG.
              VEG.   REPR.   WIDTH   HGHT.   HGHT.   CULM   PLANT
*******************************************************************************
         1     6.2    0.0     0.0     0.0     0.0     0.0    0.0
         2     6.4    0.0     0.0     0.0     0.0     0.0    0.0
         3     6.5    0.0     0.0     0.0     0.0     0.0    0.0
         4     6.5    0.0     0.0     0.0     0.0     0.0    0.0
         5     6.7    0.0     0.0     0.0     0.0     0.0    0.0
         6     6.6    0.0     0.0     0.0     0.0     0.0    0.0
         7     6.7    0.0     0.0     0.0     0.0     0.0    0.0
         8     6.6    0.0     0.0     0.0     0.0     0.0    0.0
         9     6.5    0.0     0.0     0.0     0.0     0.0    0.0
        10     6.2    0.0     0.0     0.0     0.0     0.0    0.0
        11     6.6    0.0     0.0     0.0     0.0     0.0    0.0
        12     6.7    0.0     0.0     0.0     0.0     0.0    0.0
        13     6.4    0.0     0.0     0.0     0.0     0.0    0.0
        14     6.3    0.0     0.0     0.0     0.0     0.0    0.0
        15     6.4    0.0     0.0     0.0     0.0     0.0    0.0
        16     6.4    0.0     0.0     0.0     0.0     0.0    0.0
        17     8.0    0.0     0.0     0.0     0.0     0.0    0.0
        18     6.3    0.0     0.0     0.0     0.0     0.0    0.0
        19     6.2    0.0     0.0     0.0     0.0     0.0    0.0
        20     6.6    0.0     0.0     0.0     0.0     0.0    0.0


      MEAN     6.5    0.0     0.0     0.0     0.0     0.0    0.0

   STD DEV      .4    0.0     0.0     0.0     0.0     0.0    0.0


   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII      STUDY AREA SWEETWATER          DATE 27 AUGUST    1982
-------------------               ----------          -----------------

      PLANT  PHENOLOGICAL  MAX.   MAX.   MAX.   NOS.  NOS.
       NO.   STAGE  SCORE  LEAF   LEAF   SPIKE  SPK/  VEG.
             VEG.   REPR.  WIDTH  HGHT.  HGHT.  CULM  PLANT
*******************************************************************************
        1    6.8    0.0    0.0    0.0    0.0    0.0    0.0
        2    6.8    0.0    0.0    0.0    0.0    0.0    0.0
        3    8.0    0.0    0.0    0.0    0.0    0.0    0.0
        4    6.7    0.0    0.0    0.0    0.0    0.0    0.0
        5    6.8    0.0    0.0    0.0    0.0    0.0    0.0
        6    6.9    0.0    0.0    0.0    0.0    0.0    0.0
        7    6.9    0.0    0.0    0.0    0.0    0.0    0.0
        8    6.9    0.0    0.0    0.0    0.0    0.0    0.0
        9    6.9    0.0    0.0    0.0    0.0    0.0    0.0
       10    6.8    0.0    0.0    0.0    0.0    0.0    0.0
       11    6.9    0.0    0.0    0.0    0.0    0.0    0.0
       12    8.0    0.0    0.0    0.0    0.0    0.0    0.0
       13    6.8    0.0    0.0    0.0    0.0    0.0    0.0
       14    8.0    0.0    0.0    0.0    0.0    0.0    0.0
       15    6.8    0.0    0.0    0.0    0.0    0.0    0.0
       16    6.5    0.0    0.0    0.0    0.0    0.0    0.0
       17    8.0    0.0    0.0    0.0    0.0    0.0    0.0
       18    8.0    0.0    0.0    0.0    0.0    0.0    0.0
       19    6.4    0.0    0.0    0.0    0.0    0.0    0.0
       20    8.0    0.0    0.0    0.0    0.0    0.0    0.0


    MEAN     7.1    0.0    0.0    0.0    0.0    0.0    0.0

  STD DEV     .6    0.0    0.0    0.0    0.0    0.0    0.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
```

AGROPYRON SMITHII STUDY AREA UPPER GOVT DATE 29 APRIL 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	2.8	0.0	0.0	3.0	0.0	0.0	0.0
2	2.4	0.0	0.0	4.5	0.0	0.0	0.0
3	1.8	0.0	0.0	0.0	0.0	0.0	0.0
4	2.3	0.0	0.0	2.0	0.0	0.0	0.0
5	2.8	0.0	0.0	4.0	0.0	0.0	0.0
6	2.0	0.0	0.0	.5	0.0	0.0	0.0
7	3.2	0.0	0.0	6.0	0.0	0.0	0.0
8	2.1	0.0	0.0	2.0	0.0	0.0	0.0
9	1.8	0.0	0.0	0.0	0.0	0.0	0.0
10	2.9	0.0	0.0	5.0	0.0	0.0	0.0
11	1.8	0.0	0.0	0.0	0.0	0.0	0.0
12	3.1	0.0	0.0	2.5	0.0	0.0	0.0
13	3.0	0.0	0.0	3.0	0.0	0.0	0.0
14	1.8	0.0	0.0	0.0	0.0	0.0	0.0
15	3.3	0.0	0.0	4.0	0.0	0.0	0.0
16	1.5	0.0	0.0	0.0	0.0	0.0	0.0
17	4.1	0.0	0.0	4.5	0.0	0.0	0.0
18	3.5	0.0	0.0	6.5	0.0	0.0	0.0
19	3.7	0.0	0.0	6.5	0.0	0.0	0.0
20	3.5	0.0	0.0	5.5	0.0	0.0	0.0
MEAN	2.7	0.0	0.0	4.0	0.0	0.0	0.0
STD DEV	.8	0.0	0.0	1.8	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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AGROPYRON SMITHII       STUDY AREA UPPER GOVT          DATE 19 MAY         1982
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       PLANT  PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.   NOS.
        NO.   STAGE  SCORE   LEAF    LEAF    SPIKE   SPK/   VEG.
              VEG.   REPR.   WIDTH   HGHT.   HGHT.   CULM   PLANT
********************************************************************************
          1   3.5    0.0     .1      5.0     0.0     0.0    3.0
          2   3.7    0.0     .2      7.5     0.0     0.0    1.0
          3   2.1    0.0     .1       .5     0.0     0.0    1.0
          4   2.7    0.0     .1      5.0     0.0     0.0    2.0
          5   3.4    0.0     .1      6.0     0.0     0.0    1.0
          6   2.7    0.0     .1      4.0     0.0     0.0    1.0
          7   3.2    0.0     .2     12.0     0.0     0.0    1.0
          8   3.9    0.0     .1     11.5     0.0     0.0    1.0
          9   3.4    0.0     .2      9.0     0.0     0.0    1.0
         10   3.5    0.0     .1      7.0     0.0     0.0    1.0
         11   2.2    0.0     .1      1.0     0.0     0.0    1.0
         12   3.2    0.0     .1      7.5     0.0     0.0    0.0
         13   2.7    0.0     .1      3.0     0.0     0.0    1.0
         14   1.0    0.0    0.0      0.0     0.0     0.0    1.0
         15   2.8    0.0     .2      8.0     0.0     0.0    1.0
         16   2.7    0.0     .1      5.0     0.0     0.0    2.0
         17   3.3    0.0     .1      6.5     0.0     0.0    1.0
         18   3.7    0.0     .2      8.0     0.0     0.0    1.0
         19   3.4    0.0     .2      9.0     0.0     0.0    1.0
         20   2.5    0.0     .1      3.0     0.0     0.0    1.0


       MEAN   3.0    0.0     .1      6.2     0.0     0.0    1.2

    STD DEV    .7    0.0     .0      3.1     0.0     0.0     .5

    0.0 = NOT RECORDED

    MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII STUDY AREA UPPER GOVT DATE 1 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	3.9	0.0	.2	9.0	0.0	0.0	0.0
2	3.4	0.0	.2	12.0	0.0	0.0	0.0
3	4.2	0.0	.2	15.0	0.0	0.0	0.0
4	3.5	0.0	.1	8.0	0.0	0.0	0.0
5	4.4	0.0	.1	7.0	0.0	0.0	0.0
6	4.4	0.0	.2	11.0	0.0	0.0	0.0
7	3.5	0.0	.3	7.0	0.0	0.0	0.0
8	4.6	0.0	.3	14.5	0.0	0.0	0.0
9	4.2	0.0	.2	12.0	0.0	0.0	0.0
10	3.8	0.0	.2	9.5	0.0	0.0	0.0
11	4.3	0.0	.2	11.5	0.0	0.0	0.0
12	3.7	0.0	.1	8.0	0.0	0.0	0.0
13	4.0	0.0	.1	6.0	0.0	0.0	0.0
14	4.0	0.0	.2	10.0	0.0	0.0	0.0
15	3.8	0.0	.2	8.5	0.0	0.0	0.0
16	3.7	0.0	.2	12.5	0.0	0.0	0.0
17	4.2	0.0	.2	10.0	0.0	0.0	0.0
18	4.5	0.0	.2	16.0	0.0	0.0	0.0
19	3.9	0.0	.3	13.0	0.0	0.0	0.0
20	4.3	0.0	.2	12.5	0.0	0.0	0.0
MEAN	4.0	0.0	.2	10.7	0.0	0.0	0.0
STD DEV	.4	0.0	.1	2.8	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII   STUDY AREA UPPER GOVT   DATE 13 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE	SCORE	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
	VEG.	REPR.					
1	3.9	0.0	.1	5.0	0.0	0.0	0.0
2	4.6	0.0	.1	12.5	0.0	0.0	0.0
3	3.9	0.0	.1	14.0	0.0	0.0	0.0
4	3.9	0.0	.1	9.0	0.0	0.0	0.0
5	3.7	0.0	.2	12.0	0.0	0.0	0.0
6	4.7	0.0	.3	11.0	0.0	0.0	0.0
7	3.8	0.0	.2	10.0	0.0	0.0	0.0
8	3.9	0.0	.3	20.0	0.0	0.0	0.0
9	4.8	0.0	.2	12.0	0.0	0.0	0.0
10	3.9	0.0	.2	13.0	0.0	0.0	0.0
11	3.9	0.0	.3	11.5	0.0	0.0	0.0
12	3.8	0.0	.1	10.0	0.0	0.0	0.0
13	4.5	0.0	.3	9.0	0.0	0.0	0.0
14	3.9	0.0	.2	12.0	0.0	0.0	0.0
15	3.9	0.0	.2	10.0	0.0	0.0	0.0
16	3.8	0.0	.2	15.0	0.0	0.0	0.0
17	3.8	0.0	.1	10.0	0.0	0.0	0.0
18	4.6	0.0	.2	19.5	0.0	0.0	0.0
19	4.7	0.0	.2	13.5	0.0	0.0	0.0
20	4.2	0.0	.2	13.5	0.0	0.0	0.0
MEAN	4.1	0.0	.2	12.1	0.0	0.0	0.0
STD DEV	.4	0.0	.1	3.4	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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AGROPYRON SMITHII       STUDY AREA UPPER GOVT           DATE 28 JUNE       1982
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      PLANT  PHENOLOGICAL   MAX.   MAX.    MAX.   NOS.   NOS.
       NO.   STAGE  SCORE   LEAF   LEAF    SPIKE  SPK/   VEG.
             VEG.   REPR.   WIDTH  HGHT.   HGHT.  CULM   PLANT
***************************************************************************************
        1    4.7    0.0      .1    11.0    0.0    0.0    0.0
        2    4.8    0.0      .2    13.0    0.0    0.0    0.0
        3    4.8    0.0      .1    13.5    0.0    0.0    0.0
        4    4.7    0.0      .1     9.5    0.0    0.0    0.0
        5    4.7    0.0      .1    12.5    0.0    0.0    0.0
        6    4.8    0.0      .2    12.0    0.0    0.0    0.0
        7    4.8    0.0      .2    10.0    0.0    0.0    0.0
        8    4.7    0.0      .2    21.0    0.0    0.0    0.0
        9    4.7    0.0      .2    13.0    0.0    0.0    0.0
       10    4.6    0.0      .1     9.5    0.0    0.0    0.0
       11    4.6    0.0      .2    12.0    0.0    0.0    0.0
       12    4.7    0.0      .1     8.0    0.0    0.0    0.0
       13    4.7    0.0      .1     4.0    0.0    0.0    0.0
       14    4.7    0.0      .1    12.5    0.0    0.0    0.0
       15    4.6    0.0      .1    10.5    0.0    0.0    0.0
       16    4.7    0.0      .1     9.5    0.0    0.0    0.0
       17    4.7    0.0      .1    10.5    0.0    0.0    0.0
       18    4.8    0.0      .2    23.0    0.0    0.0    0.0
       19    4.7    0.0      .2    12.0    0.0    0.0    0.0
       20    4.7    0.0      .1    13.5    0.0    0.0    0.0


     MEAN    4.7    0.0      .1    12.0    0.0    0.0    0.0

  STD DEV     .1    0.0      .1     4.1    0.0    0.0    0.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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AGROPYRON SMITHII STUDY AREA UPPER GOVT DATE 11 JULY 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE		MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
	VEG.	REPR.					
1	6.0	0.0	.1	11.0	0.0	0.0	0.0
2	6.0	0.0	.1	12.0	0.0	0.0	0.0
3	6.0	0.0	.1	14.0	0.0	0.0	0.0
4	6.0	0.0	.1	18.0	0.0	0.0	0.0
5	6.1	0.0	.1	12.0	0.0	0.0	0.0
6	6.0	0.0	.1	15.0	0.0	0.0	0.0
7	6.1	0.0	.1	13.0	0.0	0.0	0.0
8	6.2	0.0	.1	17.0	0.0	0.0	0.0
9	6.0	0.0	.1	13.0	0.0	0.0	0.0
10	6.5	0.0	.1	19.0	0.0	0.0	0.0
11	6.0	0.0	.1	13.0	0.0	0.0	0.0
12	6.0	0.0	.1	8.5	0.0	0.0	0.0
13	4.9	0.0	.1	5.0	0.0	0.0	0.0
14	4.8	0.0	.1	10.0	0.0	0.0	0.0
15	6.1	0.0	.1	11.0	0.0	0.0	0.0
16	6.0	0.0	.1	14.0	0.0	0.0	0.0
17	6.0	0.0	.1	10.0	0.0	0.0	0.0
18	6.0	0.0	.1	23.0	0.0	0.0	0.0
19	6.1	0.0	.1	13.0	0.0	0.0	0.0
20	6.2	0.0	.1	19.0	0.0	0.0	0.0
MEAN	6.0	0.0	.1	13.5	0.0	0.0	0.0
STD DEV	.4	0.0	.0	4.1	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII STUDY AREA UPPER GOVT DATE 25 JULY 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1	6.1	0.0	.1	11.5	0.0	0.0	0.0
2	6.2	0.0	.1	11.0	0.0	0.0	0.0
3	6.2	0.0	.1	13.0	0.0	0.0	0.0
4	6.3	0.0	.1	10.0	0.0	0.0	0.0
5	6.2	0.0	.1	10.5	0.0	0.0	0.0
6	6.1	0.0	.1	12.0	0.0	0.0	0.0
7	6.3	0.0	.1	12.0	0.0	0.0	0.0
8	6.2	0.0	.2	20.5	0.0	0.0	0.0
9	6.2	0.0	.1	12.5	0.0	0.0	0.0
10	6.3	0.0	.1	6.0	0.0	0.0	0.0
11	6.2	0.0	.2	12.0	0.0	0.0	0.0
12	6.4	0.0	.1	8.0	0.0	0.0	0.0
13	6.3	0.0	.1	4.5	0.0	0.0	0.0
14	6.1	0.0	.2	13.5	0.0	0.0	0.0
15	6.2	0.0	.1	11.0	0.0	0.0	0.0
16	6.4	0.0	.1	14.0	0.0	0.0	0.0
17	6.2	0.0	.1	11.0	0.0	0.0	0.0
18	6.2	0.0	.2	23.0	0.0	0.0	0.0
19	6.3	0.0	.2	14.0	0.0	0.0	0.0
20	6.2	0.0	.1	12.0	0.0	0.0	0.0
MEAN	6.2	0.0	.1	12.1	0.0	0.0	0.0
STD DEV	.1	0.0	.0	4.1	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII   STUDY AREA UPPER GOVT   DATE 10 AUGUST   1982

PLANT	PHENOLOGICAL		MAX.	MAX.	MAX.	NOS.	NOS.
NO.	STAGE	SCORE	LEAF	LEAF	SPIKE	SPK/	VEG.
	VEG.	REPR.	WIDTH	HGHT.	HGHT.	CULM	PLANT
1	6.7	0.0	0.0	0.0	0.0	0.0	0.0
2	6.3	0.0	0.0	0.0	0.0	0.0	0.0
3	6.3	0.0	0.0	0.0	0.0	0.0	0.0
4	6.5	0.0	0.0	0.0	0.0	0.0	0.0
5	6.4	0.0	0.0	0.0	0.0	0.0	0.0
6	6.3	0.0	0.0	0.0	0.0	0.0	0.0
7	6.6	0.0	0.0	0.0	0.0	0.0	0.0
8	6.5	0.0	0.0	0.0	0.0	0.0	0.0
9	6.5	0.0	0.0	0.0	0.0	0.0	0.0
10	6.7	0.0	0.0	0.0	0.0	0.0	0.0
11	6.8	0.0	0.0	0.0	0.0	0.0	0.0
12	6.5	0.0	0.0	0.0	0.0	0.0	0.0
13	6.4	0.0	0.0	0.0	0.0	0.0	0.0
14	6.6	0.0	0.0	0.0	0.0	0.0	0.0
15	6.9	0.0	0.0	0.0	0.0	0.0	0.0
16	6.8	0.0	0.0	0.0	0.0	0.0	0.0
17	6.5	0.0	0.0	0.0	0.0	0.0	0.0
18	6.5	0.0	0.0	0.0	0.0	0.0	0.0
19	6.5	0.0	0.0	0.0	0.0	0.0	0.0
20	6.8	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	6.6	0.0	0.0	0.0	0.0	0.0	0.0
STD DEV	.2	0.0	0.0	0.0	0.0	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

```
AGROPYRON SMITHII        STUDY AREA UPPER GOVT           DATE 27 AUGUST     1982
------------------                  ----------                ---------------


        PLANT   PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.   NOS.
         NO.    STAGE  SCORE   LEAF    LEAF    SPIKE   SPK/   VEG.
                VEG.   REPR.   WIDTH   HGHT.   HGHT.   CULM   PLANT
******************************************************************************
          1     8.0    0.0     0.0     0.0     0.0     0.0    0.0
          2     8.0    0.0     0.0     0.0     0.0     0.0    0.0
          3     8.0    0.0     0.0     0.0     0.0     0.0    0.0
          4     6.9    0.0     0.0     0.0     0.0     0.0    0.0
          5     8.0    0.0     0.0     0.0     0.0     0.0    0.0
          6     8.0    0.0     0.0     0.0     0.0     0.0    0.0
          7     8.0    0.0     0.0     0.0     0.0     0.0    0.0
          8     8.0    0.0     0.0     0.0     0.0     0.0    0.0
          9     8.0    0.0     0.0     0.0     0.0     0.0    0.0
         10     8.0    0.0     0.0     0.0     0.0     0.0    0.0
         11     8.0    0.0     0.0     0.0     0.0     0.0    0.0
         12     8.0    0.0     0.0     0.0     0.0     0.0    0.0
         13     8.0    0.0     0.0     0.0     0.0     0.0    0.0
         14     8.0    0.0     0.0     0.0     0.0     0.0    0.0
         15     8.0    0.0     0.0     0.0     0.0     0.0    0.0
         16     8.0    0.0     0.0     0.0     0.0     0.0    0.0
         17     8.0    0.0     0.0     0.0     0.0     0.0    0.0
         18     8.0    0.0     0.0     0.0     0.0     0.0    0.0
         19     8.0    0.0     0.0     0.0     0.0     0.0    0.0
         20     8.0    0.0     0.0     0.0     0.0     0.0    0.0


       MEAN     7.9    0.0     0.0     0.0     0.0     0.0    0.0

    STD DEV      .2    0.0     0.0     0.0     0.0     0.0    0.0

    0.0 = NOT RECORDED

    MEASUREMENTS IN CENTIMETERS
    AGROPYRON SPICATUM     STUDY AREA BUD KIMBAL          DATE 30  APRIL    1982
   --------------------               ----------               -----------------

 PLANT  PHENOLOGICAL          CLUMP               MAX. MAX.  MAX.  NO.   NO.   NO.
  NO.   STAGE SCORE   LGTH.  WIDTH   DIAM. LEAF  LEAF  SPK   SPL/  REPR  VEG
        VEG.  REPR.                       WIDTH  HGHT  HGHT  CULM  CULM  CULM
*******************************************************************************
   1     3.5    0.0    0.0    0.0    0.0  0.0   12.0   0.0  0.    0.    0.
   2     3.3    0.0    0.0    0.0    0.0  0.0   11.0   0.0  0.    0.    0.
   3     3.0    0.0    0.0    0.0    0.0  0.0    8.0   0.0  0.    0.    0.
   4     3.6    0.0    0.0    0.0    0.0  0.0   19.0   0.0  0.    0.    0.
   5     3.5    0.0    0.0    0.0    0.0  0.0   13.0   0.0  0.    0.    0.
   6     3.1    0.0    0.0    0.0    0.0  0.0    7.0   0.0  0.    0.    0.
   7     3.6    0.0    0.0    0.0    0.0  0.0   19.0   0.0  0.    0.    0.
   8     3.5    0.0    0.0    0.0    0.0  0.0   13.0   0.0  0.    0.    0.
   9     3.5    0.0    0.0    0.0    0.0  0.0   15.0   0.0  0.    0.    0.
  10     3.5    0.0    0.0    0.0    0.0  0.0   19.0   0.0  0.    0.    0.
  11     3.5    0.0    0.0    0.0    0.0  0.0   19.5   0.0  0.    0.    0.
  12     3.7    0.0    0.0    0.0    0.0  0.0   20.0   0.0  0.    0.    0.
  13     3.5    0.0    0.0    0.0    0.0  0.0   18.0   0.0  0.    0.    0.
  14     3.5    0.0    0.0    0.0    0.0  0.0   15.0   0.0  0.    0.    0.
  15     3.5    0.0    0.0    0.0    0.0  0.0   16.0   0.0  0.    0.    0.
  16     3.5    0.0    0.0    0.0    0.0  0.0   10.0   0.0  0.    0.    0.
  17     3.5    0.0    0.0    0.0    0.0  0.0   10.0   0.0  0.    0.    0.
  18     3.4    0.0    0.0    0.0    0.0  0.0    7.0   0.0  0.    0.    0.
  19     3.5    0.0    0.0    0.0    0.0  0.0   16.0   0.0  0.    0.    0.
  20     3.5    0.0    0.0    0.0    0.0  0.0   19.0   0.0  0.    0.    0.


  MEAN   3.5    0.0    0.0    0.0    0.0  0.0   14.3   0.0  0.    0.    0.

STD DEV   .2    0.0    0.0    0.0    0.0  0.0    4.4   0.0  0.    0.    0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS
```

AGROPYRON SPICATUM   STUDY AREA BUD KIMBAL   DATE 18 MAY 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	4.2	0.0	0.0	0.0	0.0	.3	22.1	0.0	0.	0.	0.
2	3.2	0.0	0.0	0.0	0.0	.2	16.8	0.0	0.	0.	0.
3	4.5	0.0	0.0	0.0	0.0	.2	12.4	0.0	0.	0.	0.
4	3.9	0.0	37.5	22.0	0.0	.2	35.1	0.0	0.	0.	0.
5	3.1	0.0	10.5	13.0	0.0	.2	16.7	0.0	0.	0.	0.
6	3.2	0.0	32.0	19.0	0.0	.2	22.6	0.0	0.	0.	0.
7	3.6	0.0	36.0	26.0	0.0	.2	31.0	0.0	0.	0.	0.
8	3.8	0.0	40.0	23.0	0.0	.2	30.4	0.0	0.	0.	0.
9	4.0	0.0	37.0	44.0	0.0	.2	29.5	0.0	0.	0.	0.
10	3.4	0.0	83.0	29.0	0.0	.2	26.8	0.0	0.	0.	0.
11	3.8	0.0	43.0	33.0	0.0	.2	26.5	0.0	0.	0.	0.
12	3.9	0.0	48.0	56.0	0.0	0.0	23.5	0.0	0.	0.	0.
13	3.5	0.0	23.0	39.0	0.0	0.0	29.0	0.0	0.	0.	0.
14	3.5	0.0	44.0	16.0	0.0	0.0	33.0	0.0	0.	0.	0.
15	3.9	0.0	7.0	4.0	0.0	0.0	13.6	0.0	0.	0.	0.
16	3.2	0.0	3.5	7.0	0.0	0.0	15.5	0.0	0.	0.	0.
17	3.2	0.0	10.0	4.0	0.0	0.0	14.8	0.0	0.	0.	0.
18	3.2	0.0	4.5	3.0	0.0	0.0	15.3	0.0	0.	0.	0.
19	3.9	0.0	13.0	15.0	0.0	0.0	29.0	0.0	0.	0.	0.
20	3.0	0.0	20.0	12.0	0.0	0.0	27.8	0.0	0.	0.	0.
MEAN	3.6	0.0	28.9	21.5	0.0	.2	23.6	0.0	0.	0.	0.
STD DEV	.4	0.0	20.7	15.0	0.0	.0	7.2	0.0	0.	0.	0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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      AGROPYRON SPICATUM    STUDY AREA BUD KIMBAL        DATE 02  JUNE     1982
     --------------------              ----------          -----------------

  PLANT  PHENOLOGICAL        CLUMP              MAX. MAX.  MAX.  NO.   NO.   NO.
   NO.   STAGE SCORE  LGTH.  WIDTH    DIAM. LEAF  LEAF  SPK   SPL/  REPR  VEG
         VEG.  REPR.                        WIDTH HGHT  HGHT  CULM  CULM  CULM
***************************************************************************
    1     5.4    0.0    0.0    0.0     0.0   .2   11.5   0.0  0.    0.    0.
    2     5.3    0.0    0.0    0.0     0.0   .2   14.0   0.0  0.    0.    0.
    3     5.0    0.0    0.0    0.0     0.0   .3   13.0   0.0  0.    0.    0.
    4     5.3    0.0    0.0    0.0     0.0   .4   23.0   0.0  0.    0.    0.
    5     5.2    0.0    0.0    0.0     0.0   .3   16.0   0.0  0.    0.    0.
    6     5.3    0.0    0.0    0.0     0.0   .4   26.0   0.0  0.    0.    0.
    7     5.4    0.0    0.0    0.0     0.0   .4   32.0   0.0  0.    0.    0.
    8     5.2    0.0    0.0    0.0     0.0   .3   16.0   0.0  0.    0.    0.
    9     5.4    0.0    0.0    0.0     0.0   .4   28.0   0.0  0.    0.    0.
   10     5.0    0.0    0.0    0.0     0.0   .3   25.5   0.0  0.    0.    0.
   11     5.4    0.0    0.0    0.0     0.0   .4   27.0   0.0  0.    0.    0.
   12     5.3    0.0    0.0    0.0     0.0   .4   24.0   0.0  0.    0.    0.
   13     5.5    0.0    0.0    0.0     0.0   .4   33.0   0.0  0.    0.    0.
   14     5.3    0.0    0.0    0.0     0.0   .4   24.5   0.0  0.    0.    0.
   15     5.1    0.0    0.0    0.0     0.0   .3   17.0   0.0  0.    0.    0.
   16     5.0    0.0    0.0    0.0     0.0   .3   17.5   0.0  0.    0.    0.
   17     5.1    0.0    0.0    0.0     0.0   .3   23.0   0.0  0.    0.    0.
   18     4.8    0.0    0.0    0.0     0.0   .2   14.0   0.0  0.    0.    0.
   19     5.3    0.0    0.0    0.0     0.0   .3   30.0   0.0  0.    0.    0.
   20     5.2    0.0    0.0    0.0     0.0   .3   29.5   0.0  0.    0.    0.


  MEAN    5.2    0.0    0.0    0.0     0.0   .3   22.2   0.0  0.    0.    0.

STD DEV    .2    0.0    0.0    0.0     0.0   .1    6.8   0.0  0.    0.    0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS
```

AGROPYRON SPICATUM   STUDY AREA BUD KIMBAL   DATE 29 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	5.5	0.0	0.0	0.0	0.0	.2	16.0	0.0	0.	0.	0.
2	5.6	0.0	0.0	0.0	0.0	.2	17.0	0.0	0.	0.	0.
3	5.4	0.0	0.0	0.0	0.0	.2	15.5	0.0	0.	0.	0.
4	5.7	11.8	0.0	0.0	0.0	.4	30.0	52.0	7.	28.	0.
5	5.6	0.0	0.0	0.0	0.0	.3	14.0	0.0	0.	0.	0.
6	5.8	0.0	0.0	0.0	0.0	.4	29.0	0.0	0.	0.	0.
7	5.8	11.9	0.0	0.0	0.0	.4	28.0	46.5	5.	6.	0.
8	5.7	0.0	0.0	0.0	0.0	.3	18.5	0.0	0.	0.	0.
9	5.8	0.0	0.0	0.0	0.0	.3	36.0	0.0	0.	0.	0.
10	5.8	0.0	0.0	0.0	0.0	.4	23.0	0.0	0.	0.	0.
11	5.9	0.0	0.0	0.0	0.0	.4	23.5	0.0	0.	0.	0.
12	5.9	0.0	0.0	0.0	0.0	.4	24.5	0.0	0.	0.	0.
13	5.8	0.0	0.0	0.0	0.0	.4	29.0	0.0	0.	0.	0.
14	5.8	0.0	0.0	0.0	0.0	.5	28.5	0.0	0.	0.	0.
15	5.8	0.0	0.0	0.0	0.0	.4	22.0	0.0	0.	0.	0.
16	5.8	0.0	0.0	0.0	0.0	.4	27.5	0.0	0.	0.	0.
17	5.7	0.0	0.0	0.0	0.0	.3	23.0	0.0	0.	0.	0.
18	5.7	0.0	0.0	0.0	0.0	.3	14.0	0.0	0.	0.	0.
19	5.8	0.0	0.0	0.0	0.0	.3	26.5	0.0	0.	0.	0.
20	5.8	0.0	0.0	0.0	0.0	.2	24.0	0.0	0.	0.	0.
MEAN	5.7	11.9	0.0	0.0	0.0	.3	23.5	49.3	6.	17.	0.
STD DEV	.1	.1	0.0	0.0	0.0	.1	6.1	3.9	1.	16.	0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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     AGROPYRON SPICATUM    STUDY AREA BUD KIMBAL         DATE 10  JULY     1982
    --------------------              ----------         -----------------

   PLANT  PHENOLOGICAL        CLUMP             MAX. MAX.  MAX.  NO.   NO.   NO.
    NO.   STAGE SCORE  LGTH.  WIDTH    DIAM. LEAF  LEAF  SPK   SPL/  REPR  VEG
          VEG.  REPR.                        WIDTH HGHT  HGHT  CULM  CULM  CULM
**************************************************************************************
     1    6.2     0.0    0.0    0.0     0.0  0.0   22.0    0.0 0.    0.    0.
     2    6.1     0.0    0.0    0.0     0.0  0.0   20.0    0.0 0.    0.    0.
     3    6.0     0.0    0.0    0.0     0.0  0.0   16.0    0.0 0.    0.    0.
     4    6.2    14.2    0.0    0.0     0.0  0.0   28.0   66.0 0.    0.    0.
     5    6.2     0.0    0.0    0.0     0.0  0.0   20.0    0.0 0.    0.    0.
     6    6.2     0.0    0.0    0.0     0.0  0.0   28.0    0.0 0.    0.    0.
     7    6.1    14.2    0.0    0.0     0.0  0.0   27.0   50.0 0.    0.    0.
     8    6.0     0.0    0.0    0.0     0.0  0.0   18.0    0.0 0.    0.    0.
     9    6.2    13.9    0.0    0.0     0.0  0.0   32.0   48.0 0.    0.    0.
    10    6.1     0.0    0.0    0.0     0.0  0.0   32.0    0.0 0.    0.    0.
    11    6.2    14.6    0.0    0.0     0.0  0.0   33.0   52.0 0.    0.    0.
    12    6.0     0.0    0.0    0.0     0.0  0.0   27.0    0.0 0.    0.    0.
    13    6.1     0.0    0.0    0.0     0.0  0.0   35.0    0.0 0.    0.    0.
    14    6.0     0.0    0.0    0.0     0.0  0.0   35.0    0.0 0.    0.    0.
    15    6.1     0.0    0.0    0.0     0.0  0.0   21.0    0.0 0.    0.    0.
    16    6.0     0.0    0.0    0.0     0.0  0.0   20.0    0.0 0.    0.    0.
    17    6.1    16.5    0.0    0.0     0.0  0.0   29.0   35.0 0.    0.    0.
    18    6.0     0.0    0.0    0.0     0.0  0.0   18.0    0.0 0.    0.    0.
    19    6.1     0.0    0.0    0.0     0.0  0.0   39.0    0.0 0.    0.    0.
    20    6.2     0.0    0.0    0.0     0.0  0.0   28.0    0.0 0.    0.    0.


   MEAN   6.1    14.7    0.0    0.0     0.0  0.0   26.4   50.2 0.    0.    0.

STD DEV    .1     1.0    0.0    0.0     0.0  0.0    6.7   11.1 0.    0.    0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS
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      AGROPYRON SPICATUM    STUDY AREA BUD KIMBAL          DATE 26  JULY      1982
      ------------------                 ----------                ----------------

   PLANT  PHENOLOGICAL          CLUMP               MAX. MAX.  MAX.  NO.   NO.   NO.
    NO.   STAGE SCORE  LGTH.  WIDTH      DIAM. LEAF  LEAF  SPK   SPL/  REPR  VEG
          VEG.  REPR.                          WIDTH HGHT  HGHT  CULM  CULM  CULM
*******************************************************************************
     1    6.3     0.0    0.0    0.0      0.0   .2   22.0   0.0  0.    0.    0.
     2    6.3     0.0    0.0    0.0      0.0   .2   21.0   0.0  0.    0.    0.
     3    6.3     0.0    0.0    0.0      0.0   .2   16.0   0.0  0.    0.    0.
     4    6.3    16.0    0.0    0.0      0.0   .3   27.0  50.0  0.    0.    0.
     5    6.4     0.0    0.0    0.0      0.0   .2   15.0   0.0  0.    0.    0.
     6    6.4     0.0    0.0    0.0      0.0   .2   29.0   0.0  0.    0.    0.
     7    6.4    16.1    0.0    0.0      0.0   .2   30.0  51.0  0.    0.    0.
     8    6.3     0.0    0.0    0.0      0.0   .2   16.5   0.0  0.    0.    0.
     9    6.4     0.0    0.0    0.0      0.0   .2   22.0   0.0  0.    0.    0.
    10    6.2     0.0    0.0    0.0      0.0   .2   20.0   0.0  0.    0.    0.
    11    6.4    16.1    0.0    0.0      0.0   .2   26.0  52.0  0.    0.    0.
    12    6.3     0.0    0.0    0.0      0.0   .3   29.0   0.0  0.    0.    0.
    13    6.3     0.0    0.0    0.0      0.0   .3   31.0   0.0  0.    0.    0.
    14    6.2     0.0    0.0    0.0      0.0   .3   18.0   0.0  0.    0.    0.
    15    6.3     0.0    0.0    0.0      0.0   .2   14.0   0.0  0.    0.    0.
    16    6.4    16.0    0.0    0.0      0.0   .3   23.0  35.0  0.    0.    0.
    17    6.2     0.0    0.0    0.0      0.0   .3   21.0   0.0  0.    0.    0.
    18    6.4     0.0    0.0    0.0      0.0   .2   12.0   0.0  0.    0.    0.
    19    6.3     0.0    0.0    0.0      0.0   .2   28.0   0.0  0.    0.    0.
    20    6.4     0.0    0.0    0.0      0.0   .2   26.0   0.0  0.    0.    0.


   MEAN   6.3    16.1    0.0    0.0      0.0   .2   22.3  47.0  0.    0.    0.

STD DEV    .1      .1    0.0    0.0      0.0   .0    5.8   8.0  0.    0.    0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS
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         AGROPYRON SPICATUM    STUDY AREA BUD KIMBAL           DATE 09  AUGUST   1982
        --------------------              ----------                ------------------

   PLANT  PHENOLOGICAL        CLUMP           MAX. MAX.  MAX.   NO.   NO.   NO.
     NO.  STAGE SCORE   LGTH.  WIDTH   DIAM. LEAF  LEAF  SPK    SPL/  REPR  VEG
          VEG.  REPR.                       WIDTH  HGHT  HGHT   CULM  CULM  CULM
   *********************************************************************************
     1    6.2     0.0    0.0    0.0    0.0  0.0    0.0    0.0   0.    0.    0.
     2    6.3     0.0    0.0    0.0    0.0  0.0    0.0    0.0   0.    0.    0.
     3    6.4     0.0    0.0    0.0    0.0  0.0    0.0    0.0   0.    0.    0.
     4    6.4    16.4    0.0    0.0    0.0  0.0    0.0    0.0   0.    0.    0.
     5    6.5     0.0    0.0    0.0    0.0  0.0    0.0    0.0   0.    0.    0.
     6    6.5     0.0    0.0    0.0    0.0  0.0    0.0    0.0   0.    0.    0.
     7    6.5    16.3    0.0    0.0    0.0  0.0    0.0    0.0   0.    0.    0.
     8    6.5     0.0    0.0    0.0    0.0  0.0    0.0    0.0   0.    0.    0.
     9    6.5     0.0    0.0    0.0    0.0  0.0    0.0    0.0   0.    0.    0.
    10    6.5     0.0    0.0    0.0    0.0  0.0    0.0    0.0   0.    0.    0.
    11    6.4     0.0    0.0    0.0    0.0  0.0    0.0    0.0   0.    0.    0.
    12    6.4     0.0    0.0    0.0    0.0  0.0    0.0    0.0   0.    0.    0.
    13    6.5     0.0    0.0    0.0    0.0  0.0    0.0    0.0   0.    0.    0.
    14    6.5     0.0    0.0    0.0    0.0  0.0    0.0    0.0   0.    0.    0.
    15    6.5     0.0    0.0    0.0    0.0  0.0    0.0    0.0   0.    0.    0.
    16    6.5     0.0    0.0    0.0    0.0  0.0    0.0    0.0   0.    0.    0.
    17    6.3     0.0    0.0    0.0    0.0  0.0    0.0    0.0   0.    0.    0.
    18    6.7     0.0    0.0    0.0    0.0  0.0    0.0    0.0   0.    0.    0.
    19    6.6     0.0    0.0    0.0    0.0  0.0    0.0    0.0   0.    0.    0.
    20    6.5     0.0    0.0    0.0    0.0  0.0    0.0    0.0   0.    0.    0.

   MEAN   6.5    16.4    0.0    0.0    0.0  0.0    0.0    0.0   0.    0.    0.

STD DEV     .1      .1    0.0    0.0    0.0  0.0    0.0    0.0   0.    0.    0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS
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  AGROPYRON SMITHII       STUDY AREA BUD KIMBAL           DATE 28 AUGUST     1982
  -----------------                  ---------                 ---------------


          PLANT   PHENOLOGICAL   MAX.    MAX.    MAX.    NOS.   NOS.
           NO.    STAGE  SCORE   LEAF    LEAF    SPIKE   SPK/   VEG.
                  VEG.   REPR.   WIDTH   HGHT.   HGHT.   CULM   PLANT
*****************************************************************************
             1    6.8    0.0     0.0     0.0     0.0     0.0    0.0
             2    6.7    0.0     0.0     0.0     0.0     0.0    0.0
             3    8.0    0.0     0.0     0.0     0.0     0.0    0.0
             4    6.9    0.0     0.0     0.0     0.0     0.0    0.0
             5    6.8    0.0     0.0     0.0     0.0     0.0    0.0
             6    6.9    0.0     0.0     0.0     0.0     0.0    0.0
             7    6.7    0.0     0.0     0.0     0.0     0.0    0.0
             8    8.0    0.0     0.0     0.0     0.0     0.0    0.0
             9    8.0    0.0     0.0     0.0     0.0     0.0    0.0
            10    6.7    0.0     0.0     0.0     0.0     0.0    0.0
            11    6.7    0.0     0.0     0.0     0.0     0.0    0.0
            12    6.8    0.0     0.0     0.0     0.0     0.0    0.0
            13    6.7    0.0     0.0     0.0     0.0     0.0    0.0
            14    6.8    0.0     0.0     0.0     0.0     0.0    0.0
            15    8.0    0.0     0.0     0.0     0.0     0.0    0.0
            16    6.9    0.0     0.0     0.0     0.0     0.0    0.0
            17    6.7    0.0     0.0     0.0     0.0     0.0    0.0
            18    6.7    0.0     0.0     0.0     0.0     0.0    0.0
            19    8.0    0.0     0.0     0.0     0.0     0.0    0.0
            20    6.9    0.0     0.0     0.0     0.0     0.0    0.0


        MEAN      7.1    0.0     0.0     0.0     0.0     0.0    0.0

     STD DEV       .5    0.0     0.0     0.0     0.0     0.0    0.0

     0.0 = NOT RECORDED

     MEASUREMENTS IN CENTIMETERS
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    AGROPYRON SPICATUM    STUDY AREA CEDAR MTN.          DATE 29  APRIL     1982
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 PLANT  PHENOLOGICAL         CLUMP              MAX. MAX.  MAX.  NO.   NO.   NO.
   NO.  STAGE SCORE  LGTH.  WIDTH     DIAM. LEAF  LEAF  SPK   SPL/  REPR  VEG
        VEG.  REPR.                         WIDTH HGHT  HGHT  CULM  CULM  CULM
*****************************************************************************
   1    3.2    0.0   0.0    0.0    0.0    .2     5.0   0.0  0.    0.    0.
   2    3.0    0.0   0.0    0.0    0.0    .1     5.0   0.0  0.    0.    0.
   3    2.9    0.0   0.0    0.0    0.0    .3     6.5   0.0  0.    0.    0.
   4    3.5    0.0   0.0    0.0    0.0    .3     8.0   0.0  0.    0.    0.
   5    3.0    0.0   0.0    0.0    0.0    .3     8.0   0.0  0.    0.    0.
   6    3.0    0.0   0.0    0.0    0.0    .2     8.0   0.0  0.    0.    0.
   7    3.0    0.0   0.0    0.0    0.0    .3     6.0   0.0  0.    0.    0.
   8    4.0    0.0   0.0    0.0    0.0    .3     6.0   0.0  0.    0.    0.
   9    4.0    0.0   0.0    0.0    0.0    .3    11.0   0.0  0.    0.    0.
  10    3.0    0.0   0.0    0.0    0.0    .2     6.0   0.0  0.    0.    0.
  11    3.6    0.0   0.0    0.0    0.0    .2    10.0   0.0  0.    0.    0.
  12    3.5    0.0   0.0    0.0    0.0    .2    11.0   0.0  0.    0.    0.
  13    4.3    0.0   0.0    0.0    0.0    .3    10.0   0.0  0.    0.    0.
  14    3.0    0.0   0.0    0.0    0.0    .2     8.0   0.0  0.    0.    0.
  15    3.8    0.0   0.0    0.0    0.0    .2     8.5   0.0  0.    0.    0.
  16    3.5    0.0   0.0    0.0    0.0    .2    10.0   0.0  0.    0.    0.
  17    3.0    0.0   0.0    0.0    0.0    .2     4.5   0.0  0.    0.    0.
  18    3.0    0.0   0.0    0.0    0.0    .2     4.0   0.0  0.    0.    0.
  19    3.0    0.0   0.0    0.0    0.0    .2     6.0   0.0  0.    0.    0.
  20    3.6    0.0   0.0    0.0    0.0    .3     8.0   0.0  0.    0.    0.


 MEAN   3.3    0.0   0.0    0.0    0.0    .2     7.5   0.0  0.    0.    0.

STD DEV  .4    0.0   0.0    0.0    0.0    .1     2.2   0.0  0.    0.    0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS
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AGROPYRON SPICATUM   STUDY AREA CEDAR MTN.   DATE 20 MAY 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	4.5	0.0	10.0	18.0	7.5	.2	0.0	0.0	0.	0.	6.
2	4.3	0.0	7.0	8.0	4.0	.2	0.0	0.0	0.	0.	3.
3	4.6	0.0	13.0	0.0	0.0	.2	0.0	0.0	0.	0.	1.
4	4.7	0.0	12.8	0.0	0.0	.2	0.0	0.0	0.	0.	1.
5	4.1	0.0	10.3	0.0	0.0	.1	0.0	0.0	0.	0.	1.
6	5.0	0.0	8.2	15.0	6.0	.1	0.0	0.0	0.	0.	5.
7	4.0	0.0	11.2	0.0	0.0	.2	0.0	0.0	0.	0.	1.
8	4.8	0.0	20.0	40.0	14.0	.2	0.0	0.0	0.	0.	45.
9	4.3	0.0	10.0	9.0	6.0	.2	0.0	0.0	0.	0.	10.
10	4.1	0.0	8.2	0.0	0.0	.1	0.0	0.0	0.	0.	2.
11	4.0	0.0	15.6	5.0	4.0	.2	0.0	0.0	0.	0.	6.
12	3.8	0.0	4.3	3.0	2.0	.1	0.0	0.0	0.	0.	3.
13	3.9	0.0	15.0	21.0	6.0	.2	0.0	0.0	0.	0.	29.
14	4.0	0.0	25.2	17.0	14.0	.2	0.0	0.0	0.	0.	16.
15	5.1	0.0	13.7	11.0	8.0	.2	0.0	0.0	0.	0.	9.
16	4.3	0.0	23.0	28.0	9.0	.2	0.0	0.0	0.	0.	23.
17	4.0	0.0	11.0	0.0	0.0	.1	0.0	0.0	0.	0.	3.
18	4.9	0.0	9.1	0.0	0.0	.2	0.0	0.0	0.	0.	4.
19	4.5	0.0	21.8	16.0	8.0	.2	0.0	0.0	0.	0.	13.
20	4.8	0.0	16.3	9.0	5.0	.2	0.0	0.0	0.	0.	7.
MEAN	4.4	0.0	13.3	15.4	7.2	.2	0.0	0.0	0.	0.	9.
STD DEV	.4	0.0	5.6	10.1	3.6	.0	0.0	0.0	0.	0.	11.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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     AGROPYRON SPICATUM    STUDY AREA CEDAR MTN.         DATE 02  JUNE     1982
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  PLANT  PHENOLOGICAL          CLUMP               MAX. MAX.  MAX.  NO.   NO.   NO.
   NO.   STAGE SCORE   LGTH.  WIDTH      DIAM. LEAF  LEAF  SPK   SPL/  REPR  VEG
         VEG.  REPR.                           WIDTH HGHT  HGHT  CULM  CULM  CULM
  ***************************************************************************************
    1     4.8    0.0    0.0    0.0       0.0   .2    15.0   0.0  0.    0.    0.
    2     5.2    0.0    0.0    0.0       0.0   .3    10.0   0.0  0.    0.    0.
    3     5.5    0.0    0.0    0.0       0.0   .2    14.0   0.0  0.    0.    0.
    4     5.4    0.0    0.0    0.0       0.0   .3    21.5   0.0  0.    0.    0.
    5     5.5    0.0    0.0    0.0       0.0   .3    18.0   0.0  0.    0.    0.
    6     5.6    0.0    0.0    0.0       0.0   .4    22.0   0.0  0.    0.    0.
    7     5.5    0.0    0.0    0.0       0.0   .4    24.0   0.0  0.    0.    0.
    8     5.6    0.0    0.0    0.0       0.0   .4    28.5   0.0  0.    0.    0.
    9     5.1    0.0    0.0    0.0       0.0   .2    20.0   0.0  0.    0.    0.
   10     5.0    0.0    0.0    0.0       0.0   .2    22.5   0.0  0.    0.    0.
   11     4.8    0.0    0.0    0.0       0.0   .3    19.0   0.0  0.    0.    0.
   12     4.9    0.0    0.0    0.0       0.0   .2    13.0   0.0  0.    0.    0.
   13     5.5    0.0    0.0    0.0       0.0   .2    15.0   0.0  0.    0.    0.
   14     5.4    0.0    0.0    0.0       0.0   .3    30.0   0.0  0.    0.    0.
   15     5.6    0.0    0.0    0.0       0.0   .3    29.0   0.0  0.    0.    0.
   16     5.3    0.0    0.0    0.0       0.0   .3    31.0   0.0  0.    0.    0.
   17     5.2    0.0    0.0    0.0       0.0   .4    20.0   0.0  0.    0.    0.
   18     5.2    0.0    0.0    0.0       0.0   .3    14.0   0.0  0.    0.    0.
   19     5.4    0.0    0.0    0.0       0.0   .4    25.0   0.0  0.    0.    0.
   20     5.6    0.0    0.0    0.0       0.0   .4    21.0   0.0  0.    0.    0.


  MEAN    5.3    0.0    0.0    0.0       0.0   .3    20.6   0.0  0.    0.    0.

STD DEV    .3    0.0    0.0    0.0       0.0   .1     6.1   0.0  0.    0.    0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS
```

AGROPYRON SPICATUM   STUDY AREA CEDAR MTN.   DATE 14 JUNE 1982

PLANT	PHENOLOGICAL STAGE SCORE			CLUMP		MAX.	MAX.	MAX.	NO.	NO.	NO.
NO.	VEG.	REPR.	LGTH.	WIDTH	DIAM.	LEAF WIDTH	LEAF HGHT	SPK HGHT	SPL/ CULM	REPR CULM	VEG CULM
1	5.4	0.0	0.0	0.0	0.0	.2	15.8	0.0	0.	0.	0.
2	5.4	0.0	0.0	0.0	0.0	.2	8.0	0.0	0.	0.	0.
3	5.4	10.8	0.0	0.0	0.0	.3	26.5	30.0	0.	0.	0.
4	5.5	0.0	0.0	0.0	0.0	.4	25.5	0.0	0.	0.	0.
5	5.0	0.0	0.0	0.0	0.0	.2	9.5	0.0	0.	0.	0.
6	5.4	0.0	0.0	0.0	0.0	.2	10.5	0.0	0.	0.	0.
7	5.2	10.4	0.0	0.0	0.0	.3	13.0	24.0	0.	0.	0.
8	5.5	10.5	0.0	0.0	0.0	.3	15.5	16.0	0.	0.	0.
9	5.5	10.5	0.0	0.0	0.0	.2	11.0	16.5	0.	0.	0.
10	5.5	0.0	0.0	0.0	0.0	.2	9.0	0.0	0.	0.	0.
11	5.5	10.6	0.0	0.0	0.0	.3	23.0	31.0	0.	0.	0.
12	5.4	0.0	0.0	0.0	0.0	.1	6.0	0.0	0.	0.	0.
13	5.5	10.2	0.0	0.0	0.0	.3	18.5	16.0	0.	0.	0.
14	5.4	0.0	0.0	0.0	0.0	.3	19.0	0.0	0.	0.	0.
15	5.4	0.0	0.0	0.0	0.0	.3	16.5	0.0	0.	0.	0.
16	5.5	10.5	0.0	0.0	0.0	.4	26.0	31.5	0.	0.	0.
17	5.5	10.3	0.0	0.0	0.0	.3	18.0	12.0	0.	0.	0.
18	5.5	10.2	0.0	0.0	0.0	.2	18.5	8.0	0.	0.	0.
19	5.4	10.4	0.0	0.0	0.0	.3	22.0	27.0	0.	0.	0.
20	5.4	10.2	0.0	0.0	0.0	.3	22.0	21.5	0.	0.	0.
MEAN	5.4	10.4	0.0	0.0	0.0	.3	16.7	21.2	0.	0.	0.
STD DEV	.1	.2	0.0	0.0	0.0	.1	6.3	8.1	0.	0.	0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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      AGROPYRON SPICATUM    STUDY AREA CEDAR MTN.        DATE 29  JUNE     1982
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   PLANT  PHENOLOGICAL          CLUMP               MAX. MAX.   MAX.   NO.    NO.    NO.
    NO.   STAGE SCORE   LGTH.  WIDTH      DIAM. LEAF   LEAF   SPK    SPL/   REPR   VEG
          VEG.  REPR.                           WIDTH  HGHT   HGHT   CULM   CULM   CULM
**************************************************************************************
     1     5.6   10.6    0.0    0.0        0.0   .2    12.0   23.5   0.     0.     0.
     2     5.6   10.6    C.0    0.0        0.0   .2     9.0   20.0   0.     0.     0.
     3     5.6   11.0    0.0    0.0        0.0   .2    26.0   37.0   0.     0.     0.
     4     6.0   10.5    0.0    0.0        0.0   .2    16.0   31.0   0.     0.     0.
     5     6.0    0.0    0.0    0.0        0.0   .3    27.0    0.0   0.     0.     0.
     6     5.9   10.8    0.0    0.0        0.0   .2    13.0   30.0   0.     0.     0.
     7     5.7   10.7    0.0    0.0        0.0   .2    14.0   36.0   0.     0.     0.
     8     5.7   11.0    0.0    0.0        0.0   .2    23.0   38.0   0.     0.     0.
     9     5.6   11.0    0.0    0.0        0.0   .2    24.0   40.0   0.     0.     0.
    10     5.8   10.7    0.0    0.0        0.0   .3    11.5   18.0   0.     0.     0.
    11     5.9   11.1    0.0    0.0        0.0   .2    17.0   39.0   0.     0.     0.
    12     5.9    0.0    0.0    0.0        0.0   .1     8.0    0.0   0.     0.     0.
    13     5.9   11.2    0.0    0.0        0.0   .2    12.0   24.0   0.     0.     0.
    14     5.8   10.9    0.0    0.0        0.0   .2    29.0   23.0   0.     0.     0.
    15     5.9    0.0    0.0    0.0        0.0   .2    15.0    0.0   0.     0.     0.
    16     5.8   10.9    0.0    0.0        0.0   .2    31.0   42.5   0.     0.     0.
    17     5.9    0.0    0.0    0.0        0.0   .1    14.0    0.0   0.     0.     0.
    18     5.6   10.7    0.0    0.0        0.0   .2    18.0   28.0   0.     0.     0.
    19     5.7   11.0    0.0    0.0        0.0   .2    25.0   37.0   0.     0.     0.
    20     6.0   10.8    0.0    0.0        0.0   .2    12.0   28.0   0.     0.     0.

   MEAN    5.8   10.8    0.0    0.0        0.0   .2    17.8   30.9   0.     0.     0.

 STD DEV    .1     .2    0.0    0.0        0.0   .0     7.1    7.8   0.     0.     0.

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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AGROPYRON SPICATUM STUDY AREA CEDAR MTN. DATE 11 JULY 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE		LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
	VEG.	REPR.									
1	6.1	0.0	0.0	0.0	0.0	.2	9.0	0.0	0.	0.	0.
2	6.3	0.0	0.0	0.0	0.0	.2	8.0	0.0	0.	0.	0.
3	6.3	10.9	0.0	0.0	0.0	.3	22.0	38.0	0.	0.	0.
4	6.2	11.4	0.0	0.0	0.0	.2	15.0	48.0	0.	0.	0.
5	6.2	0.0	0.0	0.0	0.0	.3	20.0	0.0	0.	0.	0.
6	6.2	11.6	0.0	0.0	0.0	.2	19.0	23.0	0.	0.	0.
7	6.3	11.2	0.0	0.0	0.0	.2	19.0	36.0	0.	0.	0.
8	6.3	10.9	0.0	0.0	0.0	.2	32.0	35.0	0.	0.	0.
9	6.2	10.9	0.0	0.0	0.0	.2	22.0	25.0	0.	0.	0.
10	6.2	10.9	0.0	0.0	0.0	.2	25.5	26.0	0.	0.	0.
11	6.1	11.7	0.0	0.0	0.0	.2	22.0	39.0	0.	0.	0.
12	6.3	0.0	0.0	0.0	0.0	.2	12.0	0.0	0.	0.	0.
13	6.2	11.5	0.0	0.0	0.0	.2	19.0	22.5	0.	0.	0.
14	6.1	11.0	0.0	0.0	0.0	.2	22.0	35.0	0.	0.	0.
15	6.2	0.0	0.0	0.0	0.0	.2	19.0	0.0	0.	0.	0.
16	6.2	10.9	0.0	0.0	0.0	.2	30.0	42.0	0.	0.	0.
17	6.2	10.8	0.0	0.0	0.0	.2	19.0	13.0	0.	0.	0.
18	6.2	10.9	0.0	0.0	0.0	.2	24.0	33.5	0.	0.	0.
19	6.3	10.9	0.0	0.0	0.0	.2	24.0	38.0	0.	0.	0.
20	6.2	10.9	0.0	0.0	0.0	.2	22.0	24.0	0.	0.	0.
MEAN	6.2	11.1	0.0	0.0	0.0	.2	20.2	31.9	0.	0.	0.
STD DEV	.1	.3	0.0	0.0	0.0	.0	6.0	9.2	0.	0.	0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

```
     AGROPYRON SPICATUM    STUDY AREA CEDAR MTN.        DATE 26  JULY     1982
     ------------------                ----------             ----------------

 PLANT  PHENOLOGICAL          CLUMP              MAX. MAX.  MAX.  NO.   NO.   NO.
   NO.  STAGE SCORE  LGTH.  WIDTH      DIAM. LEAF  LEAF  SPK   SPL/  REPR  VEG
        VEG.  REPR.                          WIDTH  HGHT  HGHT  CULM  CULM  CULM
****************************************************************************
   1    6.2   16.5    0.0    0.0     0.0    .3    15.5  22.5  0.    0.    0.
   2    6.3   16.4    0.0    0.0     0.0    .3    11.0  11.5  0.    0.    0.
   3    6.2   16.4    0.0    0.0     0.0    .3    15.0  24.0  0.    0.    0.
   4    6.3   16.6    0.0    0.0     0.0    .2    30.0  35.0  0.    0.    0.
   5    6.3    0.0    0.0    0.0     0.0    .2    21.0   0.0  0.    0.    0.
   6    6.2   16.8    0.0    0.0     0.0    .3    19.0  30.0  0.    0.    0.
   7    6.3   16.6    0.0    0.0     0.0    .3    18.0  36.0  0.    0.    0.
   8    6.4   16.7    0.0    0.0     0.0    .2    24.0  31.0  0.    0.    0.
   9    6.2   16.1    0.0    0.0     0.0    .2    11.0   9.0  0.    0.    0.
  10    6.2   16.5    0.0    0.0     0.0    .3    30.0  30.0  0.    0.    0.
  11    6.3    0.0    0.0    0.0     0.0    .3    26.0   0.0  0.    0.    0.
  12    6.2    0.0    0.0    0.0     0.0    .2     8.0   0.0  0.    0.    0.
  13    6.3   16.7    0.0    0.0     0.0    .2    22.0  20.0  0.    0.    0.
  14    6.4    0.0    0.0    0.0     0.0    .3    28.0   0.0  0.    0.    0.
  15    6.4    0.0    0.0    0.0     0.0    .3    13.0   0.0  0.    0.    0.
  16    6.3   16.7    0.0    0.0     0.0    .2    34.0  34.0  0.    0.    0.
  17    6.2   15.9    0.0    0.0     0.0    .3    22.0  16.0  0.    0.    0.
  18    6.4   16.5    0.0    0.0     0.0    .3    17.0  22.0  0.    0.    0.
  19    6.2   16.8    0.0    0.0     0.0    .3    27.0  39.0  0.    0.    0.
  20    6.4   16.6    0.0    0.0     0.0    .3    21.0  27.0  0.    0.    0.


 MEAN   6.3   16.5    0.0    0.0     0.0    .3    20.6  25.8  0.    0.    0.

STD DEV  .1     .2    0.0    0.0     0.0    .0     7.2   9.0  0.    0.    0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS
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```
     AGROPYRON SPICATUM    STUDY AREA CEDAR MTN.        DATE 10  AUGUST   1982
    --------------------               ----------          -----------------

  PLANT  PHENOLOGICAL        CLUMP              MAX. MAX.  MAX.  NO.   NO.   NO.
   NO.   STAGE SCORE  LGTH.  WIDTH   DIAM. LEAF  LEAF  SPK   SPL/  REPR  VEG
         VEG.  REPR.                       WIDTH HGHT  HGHT  CULM  CULM  CULM
  ***************************************************************************
     1   6.3   16.9   0.0    0.0     0.0  0.0    0.0   0.0  0.    0.    0.
     2   6.4    0.0   0.0    0.0     0.0  0.0    0.0   0.0  0.    0.    0.
     3   6.3   16.9   0.0    0.0     0.0  0.0    0.0   0.0  0.    0.    0.
     4   6.4   16.9   0.0    0.0     0.0  0.0    0.0   0.0  0.    0.    0.
     5   6.8   18.0   0.0    0.0     0.0  0.0    0.0   0.0  0.    0.    0.
     6   6.2   16.8   0.0    0.0     0.0  0.0    0.0   0.0  0.    0.    0.
     7   6.3   16.8   0.0    0.0     0.0  0.0    0.0   0.0  0.    0.    0.
     8   6.4   16.8   0.0    0.0     0.0  0.0    0.0   0.0  0.    0.    0.
     9   6.3    0.0   0.0    0.0     0.0  0.0    0.0   0.0  0.    0.    0.
    10   6.2   16.5   0.0    0.0     0.0  0.0    0.0   0.0  0.    0.    0.
    11   6.4    0.0   0.0    0.0     0.0  0.0    0.0   0.0  0.    0.    0.
    12   6.3    0.0   0.0    0.0     0.0  0.0    0.0   0.0  0.    0.    0.
    13   6.3   16.9   0.0    0.0     0.0  0.0    0.0   0.0  0.    0.    0.
    14   6.3    0.0   0.0    0.0     0.0  0.0    0.0   0.0  0.    0.    0.
    15   6.2    0.0   0.0    0.0     0.0  0.0    0.0   0.0  0.    0.    0.
    16   6.3   16.9   0.0    0.0     0.0  0.0    0.0   0.0  0.    0.    0.
    17   6.3    0.0   0.0    0.0     0.0  0.0    0.0   0.0  0.    0.    0.
    18   6.4   16.9   0.0    0.0     0.0  0.0    0.0   0.0  0.    0.    0.
    19   6.3   16.9   0.0    0.0     0.0  0.0    0.0   0.0  0.    0.    0.
    20   6.4   16.8   0.0    0.0     0.0  0.0    0.0   0.0  0.    0.    0.


  MEAN   6.3   16.9   0.0    0.0     0.0  0.0    0.0   0.0  0.    0.    0.

STD DEV   .1     .3   0.0    0.0     0.0  0.0    0.0   0.0  0.    0.    0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS
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```
     AGROPYRON SPICATUM    STUDY AREA CUMBER  3          DATE 30  APRIL     1982
     ------------------    ----------                    ----------------

  PLANT  PHENOLOGICAL          CLUMP              MAX. MAX.  MAX.  NO.   NO.   NO.
   NO.   STAGE SCORE   LGTH.  WIDTH     DIAM. LEAF  LEAF  SPK   SPL/  REPR  VEG
         VEG.  REPR.                          WIDTH HGHT  HGHT  CULM  CULM  CULM
***************************************************************************************
    1    4.1     0.0    0.0    0.0     0.0   .1    3.5   0.0  0.    0.    0.
    2    3.0     0.0    0.0    0.0     0.0   .2    4.0   0.0  0.    0.    0.
    3    4.1     0.0    0.0    0.0     0.0   .2    3.0   0.0  0.    0.    0.
    4    4.1     0.0    0.0    0.0     0.0   .2    3.2   0.0  0.    0.    0.
    5    4.1     0.0    0.0    0.0     0.0   .2    4.0   0.0  0.    0.    0.
    6    3.0     0.0    0.0    0.0     0.0   .1    2.0   0.0  0.    0.    0.
    7    2.0     0.0    0.0    0.0     0.0   .1    2.5   0.0  0.    0.    0.
    8    2.0     0.0    0.0    0.0     0.0   .1    2.5   0.0  0.    0.    0.
    9    3.0     0.0    0.0    0.0     0.0   .2    6.0   0.0  0.    0.    0.
   10    4.7     0.0    0.0    0.0     0.0   .2    5.5   0.0  0.    0.    0.
   11    4.2     0.0    0.0    0.0     0.0   .2    6.5   0.0  0.    0.    0.
   12    3.0     0.0    0.0    0.0     0.0   .1    2.5   0.0  0.    0.    0.
   13    3.0     0.0    0.0    0.0     0.0   .2    3.5   0.0  0.    0.    0.
   14    3.0     0.0    0.0    0.0     0.0   .2    3.5   0.0  0.    0.    0.
   15    2.0     0.0    0.0    0.0     0.0   .2    2.0   0.0  0.    0.    0.
   16    2.0     0.0    0.0    0.0     0.0  0.0    0.0   0.0  0.    0.    0.
   17    2.0     0.0    0.0    0.0     0.0  0.0    0.0   0.0  0.    0.    0.
   18    2.0     0.0    0.0    0.0     0.0  0.0    0.0   0.0  0.    0.    0.
   19    2.0     0.0    0.0    0.0     0.0  0.0    0.0   0.0  0.    0.    0.
   20    2.0     0.0    0.0    0.0     0.0  0.0    0.0   0.0  0.    0.    0.


  MEAN   3.0     0.0    0.0    0.0     0.0   .2    3.6   0.0  0.    0.    0.

STD DEV   .9     0.0    0.0    0.0     0.0   .0    1.4   0.0  0.    0.    0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS
```

```
         AGROPYRON SPICATUM    STUDY AREA CUMBER  3           DATE 03  JUNE     1982
        --------------------               ----------               -----------------

   PLANT  PHENOLOGICAL        CLUMP            MAX. MAX.  MAX.  NO.   NO.   NO.
     NO.  STAGE SCORE   LGTH.  WIDTH    DIAM. LEAF  LEAF  SPK   SPL/  REPR  VEG
          VEG.  REPR.                        WIDTH  HGHT  HGHT  CULM  CULM  CULM
   **********************************************************************************
     1    5.6     0.0    0.0    0.0     0.0   .3   26.5    0.0  0.    0.    0.
     2    5.4     0.0    0.0    0.0     0.0   .3   26.0    0.0  0.    0.    0.
     3    4.9     0.0    0.0    0.0     0.0   .4   35.0    0.0  0.    0.    0.
     4    4.8     0.0    0.0    0.0     0.0   .3   27.0    0.0  0.    0.    0.
     5    4.9     0.0    0.0    0.0     0.0   .3   29.0    0.0  0.    0.    0.
     6    4.7     0.0    0.0    0.0     0.0   .3   27.5    0.0  0.    0.    0.
     7    5.2     0.0    0.0    0.0     0.0   .3   24.5    0.0  0.    0.    0.
     8    4.7     0.0    0.0    0.0     0.0   .2   29.5    0.0  0.    0.    0.
     9    4.3     0.0    0.0    0.0     0.0   .2   23.5    0.0  0.    0.    0.
    10    5.5     0.0    0.0    0.0     0.0   .3   34.0    0.0  0.    0.    0.
    11    4.7     0.0    0.0    0.0     0.0   .2   23.0    0.0  0.    0.    0.
    12    5.1     0.0    0.0    0.0     0.0   .3   17.5    0.0  0.    0.    0.
    13    4.8     0.0    0.0    0.0     0.0   .3   23.0    0.0  0.    0.    0.
    14    5.1     0.0    0.0    0.0     0.0   .3   22.0    0.0  0.    0.    0.
    15    4.9     0.0    0.0    0.0     0.0   .3   32.5    0.0  0.    0.    0.
    16    4.4     0.0    0.0    0.0     0.0   .3   32.0    0.0  0.    0.    0.
    17    4.9     0.0    0.0    0.0     0.0   .3   30.0    0.0  0.    0.    0.
    18    4.9     0.0    0.0    0.0     0.0   .3   25.0    0.0  0.    0.    0.
    19    4.4     0.0    0.0    0.0     0.0   .2   28.0    0.0  0.    0.    0.
    20    5.3     0.0    0.0    0.0     0.0   .3   32.0    0.0  0.    0.    0.


   MEAN   4.9     0.0    0.0    0.0     0.0   .3   27.4    0.0  0.    0.    0.

STD DEV    .4     0.0    0.0    0.0     0.0   .0    4.5    0.0  0.    0.    0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS
```

AGROPYRON SPICATUM   STUDY AREA CUMBER 3   DATE 15 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	5.0	0.0	0.0	0.0	0.0	.2	22.5	0.0	0.	0.	0.
2	5.4	0.0	0.0	0.0	0.0	.3	21.0	0.0	0.	0.	0.
3	5.5	0.0	0.0	0.0	0.0	.4	35.0	0.0	0.	0.	0.
4	5.4	9.0	0.0	0.0	0.0	.4	29.0	0.0	0.	0.	0.
5	5.5	0.0	0.0	0.0	0.0	.4	26.5	0.0	0.	0.	0.
6	5.3	0.0	0.0	0.0	0.0	.3	25.0	0.0	0.	0.	0.
7	5.4	0.0	0.0	0.0	0.0	.4	27.0	0.0	0.	0.	0.
8	5.1	0.0	0.0	0.0	0.0	.2	22.5	0.0	0.	0.	0.
9	5.2	0.0	0.0	0.0	0.0	.3	30.0	0.0	0.	0.	0.
10	5.3	0.0	0.0	0.0	0.0	.3	26.0	0.0	0.	0.	0.
11	5.4	0.0	0.0	0.0	0.0	.3	27.0	0.0	0.	0.	0.
12	5.3	9.0	0.0	0.0	0.0	.3	18.5	0.0	0.	0.	0.
13	5.3	0.0	0.0	0.0	0.0	.4	15.0	0.0	0.	0.	0.
14	5.3	0.0	0.0	0.0	0.0	.3	20.0	0.0	0.	0.	0.
15	5.2	0.0	0.0	0.0	0.0	.3	18.5	0.0	0.	0.	0.
16	5.3	0.0	0.0	0.0	0.0	.2	24.5	0.0	0.	0.	0.
17	5.4	0.0	0.0	0.0	0.0	.3	23.0	0.0	0.	0.	0.
18	5.5	0.0	0.0	0.0	0.0	.4	37.0	0.0	0.	0.	0.
19	5.1	0.0	0.0	0.0	0.0	.2	18.0	0.0	0.	0.	0.
20	5.4	0.0	0.0	0.0	0.0	.4	27.0	0.0	0.	0.	0.
MEAN	5.3	9.0	0.0	0.0	0.0	.3	24.7	0.0	0.	0.	0.
STD DEV	.1	0.0	0.0	0.0	0.0	.1	5.6	0.0	0.	0.	0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

```
   AGROPYRON SPICATUM    STUDY AREA CUMBER  3          DATE 29  JUNE      1982
  --------------------              ---------            ----------------

PLANT  PHENOLOGICAL          CLUMP                 MAX. MAX.  MAX.  NO.    NO.    NO.
 NO.   STAGE SCORE  LGTH.  WIDTH      DIAM. LEAF  LEAF  SPK   SPL/   REPR   VEG
       VEG.  REPR.                          WIDTH  HGHT  HGHT  CULM   CULM   CULM
*********************************************************************************
  1    6.0    0.0    0.0    0.0        0.0   .2    24.5   0.0  0.     0.     0.
  2    5.7    0.0    0.0    0.0        0.0   .2    21.0   0.0  0.     0.     0.
  3    5.6    0.0    0.0    0.0        0.0   .3    32.0   0.0  0.     0.     0.
  4    5.3   10.5    0.0    0.0        0.0   .3    30.0  36.0  0.     0.     0.
  5    5.6   10.5    0.0    0.0        0.0   .3    29.0  38.5  0.     0.     0.
  6    5.6    0.0    0.0    0.0        0.0   .3    27.5   0.0  0.     0.     0.
  7    4.7    0.0    0.0    0.0        0.0   .2    22.0   0.0  0.     0.     0.
  8    4.7    0.0    0.0    0.0        0.0   .2    27.0   0.0  0.     0.     0.
  9    6.0    0.0    0.0    0.0        0.0   .2    22.5   0.0  0.     0.     0.
 10    5.2    0.0    0.0    0.0        0.0   .3    27.0   0.0  0.     0.     0.
 11    5.3    0.0    0.0    0.0        0.0   .2    25.0   0.0  0.     0.     0.
 12    5.2    0.0    0.0    0.0        0.0   .2    22.0   0.0  0.     0.     0.
 13    5.2    0.0    0.0    0.0        0.0   .3    24.0   0.0  0.     0.     0.
 14    4.7    0.0    0.0    0.0        0.0   .3    24.0   0.0  0.     0.     0.
 15    5.7    0.0    0.0    0.0        0.0   .3    39.0   0.0  0.     0.     0.
 16    5.2    0.0    0.0    0.0        0.0   .2    18.0   0.0  0.     0.     0.
 17    6.0    0.0    0.0    0.0        0.0   .2    29.0   0.0  0.     0.     0.
 18    6.0    0.0    0.0    0.0        0.0   .3    32.0   0.0  0.     0.     0.
 19    5.2    0.0    0.0    0.0        0.0   .2    26.0   0.0  0.     0.     0.
 20    5.1    0.0    0.0    0.0        0.0   .2    30.0   0.0  0.     0.     0.


 MEAN  5.4   10.5    0.0    0.0        0.0   .2    26.6  37.3  0.     0.     0.

STD DEV  .4   0.0    0.0    0.0        0.0   .1     4.8   1.8  0.     0.     0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS
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```
AGROPYRON SPICATUM    STUDY AREA CUMBER  3         DATE 11  JULY     1982
------------------                     ---------              ---------------

PLANT  PHENOLOGICAL          CLUMP                MAX. MAX.   MAX.  NO.    NO.    NO.
 NO.   STAGE SCORE   LGTH.  WIDTH    DIAM. LEAF   LEAF   SPK    SPL/   REPR   VEG
       VEG.  REPR.                          WIDTH  HGHT   HGHT   CULM   CULM   CULM
****************************************************************************************
  1     6.2    0.0    0.0    0.0      0.0    .2    22.0    0.0  0.     0.     0.
  2     6.2    0.0    0.0    0.0      0.0    .2    24.0    0.0  0.     0.     0.
  3     6.3    0.0    0.0    0.0      0.0    .2    39.0    0.0  0.     0.     0.
  4     6.4   11.3    0.0    0.0      0.0    .2    29.0   42.0  0.     0.     0.
  5     6.4   11.5    0.0    0.0      0.0    .3    36.0   44.0  0.     0.     0.
  6     6.3    0.0    0.0    0.0      0.0    .1    16.0    0.0  0.     0.     0.
  7     6.3    0.0    0.0    0.0      0.0    .2    30.0    0.0  0.     0.     0.
  8     6.3    0.0    0.0    0.0      0.0    .2    33.0    0.0  0.     0.     0.
  9     6.3    0.0    0.0    0.0      0.0    .1    24.0    0.0  0.     0.     0.
 10     6.3    0.0    0.0    0.0      0.0    .2    29.0    0.0  0.     0.     0.
 11     6.2    0.0    0.0    0.0      0.0    .1    26.0    0.0  0.     0.     0.
 12     6.3    0.0    0.0    0.0      0.0    .2    18.0    0.0  0.     0.     0.
 13     6.4    0.0    0.0    0.0      0.0    .2    25.0    0.0  0.     0.     0.
 14     6.3    0.0    0.0    0.0      0.0    .2    23.0    0.0  0.     0.     0.
 15     6.2    0.0    0.0    0.0      0.0    .3    38.0    0.0  0.     0.     0.
 16     6.3    0.0    0.0    0.0      0.0    .2    24.0    0.0  0.     0.     0.
 17     6.4    0.0    0.0    0.0      0.0    .2    29.0    0.0  0.     0.     0.
 18     6.4    0.0    0.0    0.0      0.0    .2    28.0    0.0  0.     0.     0.
 19     6.3    0.0    0.0    0.0      0.0    .2    23.0    0.0  0.     0.     0.
 20     6.2    0.0    0.0    0.0      0.0    .2    29.0    0.0  0.     0.     0.


 MEAN   6.3   11.4    0.0    0.0      0.0    .2    27.3   43.0  0.     0.     0.

STD DEV  .1     .1    0.0    0.0      0.0    .1     6.1    1.4  0.     0.     0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS
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```
     AGROPYRON SPICATUM    STUDY AREA CUMBER  3           DATE 27  JULY     1982
     ------------------                       ---------           ----------------

   PLANT  PHENOLOGICAL          CLUMP              MAX. MAX.  MAX.  NO.   NO.   NO.
    NO.   STAGE SCORE  LGTH.  WIDTH    DIAM. LEAF  LEAF  SPK   SPL/  REPR  VEG
          VEG.  REPR.                        WIDTH  HGHT  HGHT  CULM  CULM  CULM
   *******************************************************************************
     1    6.4     0.0   0.0     0.0     0.0    .3   30.0   0.0  0.    0.    0.
     2    6.4     0.0   0.0     0.0     0.0    .3   24.0   0.0  0.    0.    0.
     3    6.4     0.0   0.0     0.0     0.0    .3   43.5   0.0  0.    0.    0.
     4    6.4    16.7   0.0     0.0     0.0    .3   31.0  36.0  0.    0.    0.
     5    6.5    16.4   0.0     0.0     0.0    .3   38.0  51.5  0.    0.    0.
     6    6.4     0.0   0.0     0.0     0.0    .3   28.0   0.0  0.    0.    0.
     7    6.4     0.0   0.0     0.0     0.0    .3   31.0   0.0  0.    0.    0.
     8    6.5     0.0   0.0     0.0     0.0    .3   33.0   0.0  0.    0.    0.
     9    6.4     0.0   0.0     0.0     0.0    .3   27.0   0.0  0.    0.    0.
    10    6.3     0.0   0.0     0.0     0.0    .3   38.0   0.0  0.    0.    0.
    11    6.3     0.0   0.0     0.0     0.0    .2   25.0   0.0  0.    0.    0.
    12    6.3     0.0   0.0     0.0     0.0    .3   21.0   0.0  0.    0.    0.
    13    6.4     0.0   0.0     0.0     0.0    .3   22.0   0.0  0.    0.    0.
    14    6.4     0.0   0.0     0.0     0.0    .2   23.0   0.0  0.    0.    0.
    15    6.2     0.0   0.0     0.0     0.0    .3   25.0   0.0  0.    0.    0.
    16    6.4     0.0   0.0     0.0     0.0    .2   32.0   0.0  0.    0.    0.
    17    6.4     0.0   0.0     0.0     0.0    .2   32.0   0.0  0.    0.    0.
    18    6.5     0.0   0.0     0.0     0.0    .3   34.0   0.0  0.    0.    0.
    19    6.5     0.0   0.0     0.0     0.0    .2   29.0   0.0  0.    0.    0.
    20    6.4    16.7   0.0     0.0     0.0    .3   38.0  45.0  0.    0.    0.

   MEAN   6.4    16.6   0.0     0.0     0.0    .3   30.2  44.2  0.    0.    0.

 STD DEV   .1      .2   0.0     0.0     0.0    .0    6.1   7.8  0.    0.    0.

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
```

```
      AGROPYRON SPICATUM    STUDY AREA CUMBER  3           DATE 09  AUGUST   1982
     --------------------               ----------            -----------------

   PLANT  PHENOLOGICAL        CLUMP               MAX. MAX.   MAX.   NO.    NO.    NO.
    NO.   STAGE SCORE  LGTH.  WIDTH    DIAM. LEAF   LEAF   SPK    SPL/   REPR   VEG
          VEG.  REPR.                        WIDTH  HGHT   HGHT   CULM   CULM   CULM
*****************************************************************************************
     1    6.4     0.0    0.0    0.0    0.0  0.0    0.0    0.0  0.     0.     0.
     2    6.3     0.0    0.0    0.0    0.0  0.0    0.0    0.0  0.     0.     0.
     3    6.4     0.0    0.0    0.0    0.0  0.0    0.0    0.0  0.     0.     0.
     4    6.4    16.8    0.0    0.0    0.0  0.0    0.0    0.0  0.     0.     0.
     5    6.3    16.9    0.0    0.0    0.0  0.0    0.0    0.0  0.     0.     0.
     6    6.4     0.0    0.0    0.0    0.0  0.0    0.0    0.0  0.     0.     0.
     7    6.5     0.0    0.0    0.0    0.0  0.0    0.0    0.0  0.     0.     0.
     8    6.4     0.0    0.0    0.0    0.0  0.0    0.0    0.0  0.     0.     0.
     9    6.4     0.0    0.0    0.0    0.0  0.0    0.0    0.0  0.     0.     0.
    10    6.4     0.0    0.0    0.0    0.0  0.0    0.0    0.0  0.     0.     0.
    11    6.3     0.0    0.0    0.0    0.0  0.0    0.0    0.0  0.     0.     0.
    12    6.3     0.0    0.0    0.0    0.0  0.0    0.0    0.0  0.     0.     0.
    13    6.4     0.0    0.0    0.0    0.0  0.0    0.0    0.0  0.     0.     0.
    14    6.5     0.0    0.0    0.0    0.0  0.0    0.0    0.0  0.     0.     0.
    15    6.3     0.0    0.0    0.0    0.0  0.0    0.0    0.0  0.     0.     0.
    16    6.4     0.0    0.0    0.0    0.0  0.0    0.0    0.0  0.     0.     0.
    17    6.3     0.0    0.0    0.0    0.0  0.0    0.0    0.0  0.     0.     0.
    18    6.4     0.0    0.0    0.0    0.0  0.0    0.0    0.0  0.     0.     0.
    19    6.3     0.0    0.0    0.0    0.0  0.0    0.0    0.0  0.     0.     0.
    20    6.4     0.0    0.0    0.0    0.0  0.0    0.0    0.0  0.     0.     0.


   MEAN   6.4    16.9    0.0    0.0    0.0  0.0    0.0    0.0  0.     0.     0.

STD DEV    .1      .1    0.0    0.0    0.0  0.0    0.0    0.0  0.     0.     0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS
```

AGROPYRON SPICATUM   STUDY AREA DEMER   DATE 30 APRIL 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	3.8	0.0	0.0	0.0	0.0	0.0	18.3	0.0	0.	0.	0.
2	3.5	0.0	0.0	0.0	0.0	0.0	18.0	0.0	0.	0.	0.
3	3.5	0.0	0.0	0.0	0.0	0.0	27.0	0.0	0.	0.	0.
4	3.5	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.	0.	0.
5	3.5	0.0	0.0	0.0	0.0	0.0	19.0	0.0	0.	0.	0.
6	3.5	0.0	0.0	0.0	0.0	0.0	19.0	0.0	0.	0.	0.
7	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
MEAN	3.5	0.0	0.0	0.0	0.0	0.0	21.1	0.0	0.	0.	0.
STD DEV	.1	0.0	0.0	0.0	0.0	0.0	3.9	0.0	0.	0.	0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

```
     AGROPYRON SPICATUM    STUDY AREA DEMER              DATE 18  MAY       1982
    --------------------              ----------             -----------------

  PLANT  PHENOLOGICAL           CLUMP              MAX. MAX.  MAX.  NO.   NO.   NO.
   NO.   STAGE SCORE  LGTH.  WIDTH    DIAM. LEAF  LEAF  SPK   SPL/  REPR  VEG
         VEG.  REPR.                          WIDTH HGHT  HGHT  CULM  CULM  CULM
*********************************************************************************
    1    3.8     0.0   20.4   12.5    17.5   .2     0.0    0.0  0.     0.    0.
    2    3.0     0.0   25.2   13.8    17.9   .2     0.0    0.0  0.     0.    0.
    3    3.0     0.0   20.5   12.6    25.5   .2     0.0    0.0  0.     0.    0.
    4    3.9     0.0   20.3   41.8    31.2   .2     0.0    0.0  0.     0.    0.
    5    3.8     0.0   23.2   29.7    22.4   .2     0.0    0.0  0.     0.    0.
    6    3.0     0.0   11.4    5.2     2.5   .1     0.0    0.0  0.     0.    0.
    7    3.2     0.0   12.5    5.2     2.8   .1     0.0    0.0  0.     0.    0.


  MEAN   3.4     0.0   19.1   17.3    17.1   .2     0.0    0.0  0.     0.    0.

STD DEV   .4     0.0    5.2   13.6    10.9   .0     0.0    0.0  0.     0.    0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS
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```
    AGROPYRON SPICATUM    STUDY AREA DEMER              DATE 02  JUNE      1982
   --------------------               ----------              -----------------

  PLANT  PHENOLOGICAL         CLUMP              MAX. MAX.  MAX.  NO.   NO.   NO.
   NO.   STAGE SCORE  LGTH.  WIDTH      DIAM. LEAF  LEAF  SPK   SPL/  REPR  VEG
         VEG.  REPR.                         WIDTH  HGHT  HGHT  CULM  CULM  CULM
  ***************************************************************************************
    1    5.0     0.0    0.0    0.0       0.0    .2   20.0   0.0  0.    0.    0.
    2    5.2     9.6    0.0    0.0       0.0    .4   18.0  33.0  7.   30.    0.
    3    5.4     9.0    0.0    0.0       0.0    .3   25.0  22.0  0.    1.    0.
    4    5.5     9.4    0.0    0.0       0.0    .4   33.0  38.0  4.   15.    0.
    5    5.3     9.3    0.0    0.0       0.0    .4   28.0  26.0  3.    1.    0.
    6    5.3     0.0    0.0    0.0       0.0    .3   24.0   0.0  0.    0.    0.
    7    5.0     0.0    0.0    0.0       0.0    .2   13.0   0.0  0.    0.    0.


  MEAN   5.2     9.3    0.0    0.0       0.0    .3   23.0  29.8  5.   12.    0.

STD DEV   .2      .3    0.0    0.0       0.0    .1    6.6   7.1  2.   14.    0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS
```

AGROPYRON SPICATUM STUDY AREA DEMER DATE 29 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	5.8	0.0	0.0	0.0	0.0	.4	23.5	0.0	0.	0.	0.
2	5.7	13.5	0.0	0.0	0.0	.4	23.5	52.0	7.	50.	0.
3	5.7	13.4	0.0	0.0	0.0	.3	25.0	46.0	5.	1.	0.
4	5.8	13.6	0.0	0.0	0.0	.3	26.0	54.0	7.	15.	0.
5	5.8	13.1	0.0	0.0	0.0	.3	24.0	44.0	6.	3.	0.
6	5.8	0.0	0.0	0.0	0.0	.4	22.0	0.0	0.	0.	0.
7	5.8	0.0	0.0	0.0	0.0	.2	21.5	0.0	0.	0.	0.
MEAN	5.8	13.4	0.0	0.0	0.0	.3	23.6	49.0	6.	17.	0.
STD DEV	.0	.2	0.0	0.0	0.0	.1	1.6	4.8	1.	23.	0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

```
     AGROPYRON SPICATUM    STUDY AREA DEMER              DATE 10  JULY     1982
    --------------------              ----------                 -----------------

  PLANT   PHENOLOGICAL        CLUMP              MAX. MAX.  MAX.  NO.   NO.   NO.
   NO.    STAGE SCORE  LGTH.  WIDTH     DIAM. LEAF  LEAF  SPK   SPL/  REPR  VEG
          VEG.  REPR.                         WIDTH HGHT  HGHT  CULM  CULM  CULM
  ***********************************************************************************
    1     6.1     0.0   0.0    0.0       0.0  0.0   22.0    0.0 0.     0.    0.
    2     6.1    15.9   0.0    0.0       0.0  0.0   26.0   58.0 0.     0.    0.
    3     6.1    15.9   0.0    0.0       0.0  0.0   25.0   45.0 0.     0.    0.
    4     6.1    15.8   0.0    0.0       0.0  0.0   28.0   46.0 0.     0.    0.
    5     6.1    15.8   0.0    0.0       0.0  0.0   28.0   46.0 0.     0.    0.
    6     6.1     0.0   0.0    0.0       0.0  0.0   18.0    0.0 0.     0.    0.
    7     6.1     0.0   0.0    0.0       0.0  0.0   23.0    0.0 0.     0.    0.


   MEAN   6.1    15.9   0.0    0.0       0.0  0.0   24.3   48.8 0.     0.    0.

 STD DEV   .0      .1   0.0    0.0       0.0  0.0    3.6    6.2 0.     0.    0.

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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```
      AGROPYRON SPICATUM    STUDY AREA DEMER            DATE 25  JULY     1982
     --------------------              ----------            -----------------

   PLANT  PHENOLOGICAL          CLUMP              MAX. MAX.  MAX.  NO.   NO.   NO.
    NO.   STAGE SCORE   LGTH.  WIDTH     DIAM. LEAF  LEAF  SPK   SPL/  REPR  VEG
          VEG.  REPR.                          WIDTH HGHT  HGHT  CULM  CULM  CULM
   ****************************************************************************
     1     6.2    0.0    0.0    0.0      0.0   .3   18.0   0.0  0.    0.    0.
     2     6.2   16.3    0.0    0.0      0.0   .3   23.0  45.0  0.    0.    0.
     3     6.3   16.0    0.0    0.0      0.0   .3   22.0  47.0  0.    0.    0.
     4     6.2   15.9    0.0    0.0      0.0   .2   36.0  26.0  0.    0.    0.
     5     6.2   15.9    0.0    0.0      0.0   .3   21.0   0.0  0.    0.    0.
     6     6.3   15.9    0.0    0.0      0.0   .3   21.5  30.0  0.    0.    0.
     7     6.3    0.0    0.0    0.0      0.0   .2   13.0   0.0  0.    0.    0.


   MEAN    6.2   16.0    0.0    0.0      0.0   .3   22.1  37.0  0.    0.    0.

 STD DEV    .1     .2    0.0    0.0      0.0   .0    7.0  10.6  0.    0.    0.

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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```
         AGROPYRON SPICATUM    STUDY AREA DEMER               DATE 09  AUGUST   1982
        --------------------              ----------               ------------------

   PLANT  PHENOLOGICAL        CLUMP           MAX. MAX.  MAX.  NO.   NO.   NO.
     NO.  STAGE SCORE   LGTH.  WIDTH   DIAM. LEAF  LEAF  SPK   SPL/  REPR  VEG
          VEG.  REPR.                       WIDTH  HGHT  HGHT  CULM  CULM  CULM
   *********************************************************************************
     1    6.3    0.0     0.0    0.0    0.0  0.0    0.0    0.0  0.    0.    0.
     2    6.4    0.0     0.0    0.0    0.0  0.0    0.0    0.0  0.    0.    0.
     3    6.4   16.5     0.0    0.0    0.0  0.0    0.0    0.0  0.    0.    0.
     4    6.5   16.4     0.0    0.0    0.0  0.0    0.0    0.0  0.    0.    0.
     5    6.5   16.5     0.0    0.0    0.0  0.0    0.0    0.0  0.    0.    0.
     6    6.5    0.0     0.0    0.0    0.0  0.0    0.0    0.0  0.    0.    0.
     7    6.4    0.0     0.0    0.0    0.0  0.0    0.0    0.0  0.    0.    0.


   MEAN   6.4   16.5     0.0    0.0    0.0  0.0    0.0    0.0  0.    0.    0.

STD DEV    .1     .1     0.0    0.0    0.0  0.0    0.0    0.0  0.    0.    0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS
```

AGROPYRON SPICATUM   STUDY AREA HORSE CRK   DATE 30 APRIL 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	4.5	0.0	0.0	0.0	0.0	0.0	15.0	0.0	0.	0.	0.
2	5.3	0.0	0.0	0.0	0.0	0.0	18.5	0.0	0.	0.	0.
3	4.5	0.0	0.0	0.0	0.0	0.0	12.0	0.0	0.	0.	0.
4	5.5	0.0	0.0	0.0	0.0	0.0	19.0	0.0	0.	0.	0.
5	4.3	0.0	0.0	0.0	0.0	0.0	12.0	0.0	0.	0.	0.
6	5.2	0.0	0.0	0.0	0.0	0.0	14.0	0.0	0.	0.	0.
7	4.0	0.0	0.0	0.0	0.0	0.0	18.0	0.0	0.	0.	0.
8	4.9	0.0	0.0	0.0	0.0	0.0	12.5	0.0	0.	0.	0.
9	4.5	0.0	0.0	0.0	0.0	0.0	10.5	0.0	0.	0.	0.
10	5.3	0.0	0.0	0.0	0.0	0.0	20.5	0.0	0.	0.	0.
11	4.8	0.0	0.0	0.0	0.0	0.0	10.5	0.0	0.	0.	0.
12	4.9	0.0	0.0	0.0	0.0	0.0	13.5	0.0	0.	0.	0.
13	5.3	0.0	0.0	0.0	0.0	0.0	18.0	0.0	0.	0.	0.
14	4.8	0.0	0.0	0.0	0.0	0.0	17.0	0.0	0.	0.	0.
15	5.3	0.0	0.0	0.0	0.0	0.0	15.0	0.0	0.	0.	0.
16	4.5	0.0	0.0	0.0	0.0	0.0	9.5	0.0	0.	0.	0.
17	4.5	0.0	0.0	0.0	0.0	0.0	7.0	0.0	0.	0.	0.
18	4.5	0.0	0.0	0.0	0.0	0.0	11.0	0.0	0.	0.	0.
19	4.5	0.0	0.0	0.0	0.0	0.0	13.0	0.0	0.	0.	0.
20	4.5	0.0	0.0	0.0	0.0	0.0	12.0	0.0	0.	0.	0.
MEAN	4.8	0.0	0.0	0.0	0.0	0.0	13.9	0.0	0.	0.	0.
STD DEV	.4	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.	0.	0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

```
     AGROPYRON SPICATUM    STUDY AREA HORSE CRK          DATE 18  MAY       1982
    --------------------              ----------              ----------------

  PLANT  PHENOLOGICAL          CLUMP                  MAX. MAX.  MAX.  NO.   NO.   NO.
   NO.   STAGE SCORE  LGTH.  WIDTH    DIAM. LEAF  LEAF  SPK   SPL/  REPR  VEG
         VEG.  REPR.                          WIDTH HGHT  HGHT  CULM  CULM  CULM
******************************************************************************
   1     3.9     0.0   27.0   24.0     0.0   .4   15.0    0.0  0.    0.    0.
   2     5.5     0.0   24.0   21.0     0.0   .5   17.0    0.0  0.    0.    0.
   3     4.2     0.0   16.0    7.0     0.0   .5   22.5    0.0  0.    0.    0.
   4     3.7     0.0    6.0    4.0     0.0   .4    7.0    0.0  0.    0.    0.
   5     5.9     0.0    4.0    1.5     0.0   .5   14.0    0.0  0.    0.    0.
   6     5.3     0.0   28.0   20.0     0.0   .4   22.5    0.0  0.    0.    0.
   7     4.9     0.0   38.0   13.0     0.0   .4   18.0    0.0  0.    0.    0.
   8     4.9     0.0   30.0   27.0     0.0   .4   16.0    0.0  0.    0.    0.
   9     4.8     0.0   10.0    7.0     0.0   .5   13.5    0.0  0.    0.    0.
  10     4.9     0.0   50.0   24.0     0.0   .5   25.5    0.0  0.    0.    0.
  11     4.1     0.0   11.0    3.0     0.0   .3   16.0    0.0  0.    0.    0.
  12     4.6     0.0   18.0   13.0     0.0   .2   12.0    0.0  0.    0.    0.
  13     5.9     0.0   14.0   11.0     0.0   .3   22.0    0.0  0.    0.    0.
  14     5.1     0.0   10.0    7.0     0.0   .4   24.5    0.0  0.    0.    0.
  15     5.8     0.0   21.0   15.0     0.0   .3   15.0    0.0  0.    0.    0.
  16     4.9     0.0   14.0    6.0     0.0   .3   13.0    0.0  0.    0.    0.
  17     4.9     0.0    3.0    2.0     0.0   .3    6.0    0.0  0.    0.    0.
  18     4.9     0.0    0.0    0.0     0.0   .3   12.0    0.0  0.    0.    0.
  19     5.8     0.0    7.0    4.0     0.0   .4   10.0    0.0  0.    0.    0.
  20     5.0     0.0    0.0    0.0     0.0  0.0    0.0    0.0  0.    0.    0.


  MEAN   4.9     0.0   18.4   11.6     0.0   .4   15.9    0.0  0.    0.    0.

STD DEV   .6     0.0   12.6    8.4     0.0   .1    5.6    0.0  0.    0.    0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS
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AGROPYRON SPICATUM   STUDY AREA HORSE CRK   DATE 02 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	PHENOLOGICAL SCORE REPR.	CLUMP LGTH.	CLUMP WIDTH	CLUMP DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	5.2	9.5	0.0	0.0	0.0	.3	10.5	24.0	7.	25.	0.
2	5.3	9.6	0.0	0.0	0.0	.3	9.5	24.0	5.	20.	0.
3	5.3	9.4	0.0	0.0	0.0	.4	16.0	27.5	3.	6.	0.
4	5.2	0.0	0.0	0.0	0.0	.3	7.5	0.0	0.	0.	0.
5	5.3	9.2	0.0	0.0	0.0	.4	12.0	15.0	0.	1.	0.
6	5.3	9.6	0.0	0.0	0.0	.4	10.5	26.0	7.	4.	0.
7	5.4	9.6	0.0	0.0	0.0	.4	18.5	24.5	7.	10.	0.
8	5.4	9.6	0.0	0.0	0.0	.3	12.5	26.0	6.	12.	0.
9	5.4	0.0	0.0	0.0	0.0	.3	11.5	0.0	0.	0.	0.
10	5.4	9.6	0.0	0.0	0.0	.4	25.0	37.0	7.	10.	0.
11	5.3	9.5	0.0	0.0	0.0	.3	12.5	24.0	5.	2.	0.
12	5.3	9.3	0.0	0.0	0.0	.4	17.0	20.0	2.	3.	0.
13	5.3	9.5	0.0	0.0	0.0	.3	21.0	27.0	5.	7.	0.
14	5.3	9.3	0.0	0.0	0.0	.3	14.0	19.0	2.	2.	0.
15	5.3	9.3	0.0	0.0	0.0	.3	15.0	20.0	2.	6.	0.
16	5.2	0.0	0.0	0.0	0.0	.3	12.0	0.0	0.	0.	0.
17	5.0	0.0	0.0	0.0	0.0	.2	7.5	0.0	0.	0.	0.
18	5.1	0.0	0.0	0.0	0.0	.2	12.0	0.0	0.	0.	0.
19	5.4	0.0	0.0	0.0	0.0	.2	16.5	0.0	0.	0.	0.
20	5.3	0.0	0.0	0.0	0.0	.2	15.0	0.0	0.	0.	0.
MEAN	5.3	9.5	0.0	0.0	0.0	.3	13.8	24.2	5.	8.	0.
STD DEV	.1	.1	0.0	0.0	0.0	.1	4.4	5.3	2.	7.	0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SPICATUM   STUDY AREA HORSE CRK   DATE 29 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	5.6	10.6	0.0	0.0	0.0	.4	9.0	48.0	6.	35.	0.
2	5.7	10.8	0.0	0.0	0.0	.4	16.0	52.0	6.	25.	0.
3	5.7	10.5	0.0	0.0	0.0	.4	25.0	64.0	7.	7.	0.
4	5.6	0.0	0.0	0.0	0.0	.3	9.0	0.0	0.	0.	0.
5	5.6	10.6	0.0	0.0	0.0	.3	16.5	48.0	5.	1.	0.
6	5.7	10.7	0.0	0.0	0.0	.4	22.0	61.0	7.	20.	0.
7	5.8	10.7	0.0	0.0	0.0	.5	22.5	61.0	8.	10.	0.
8	5.7	10.7	0.0	0.0	0.0	.3	15.0	39.0	5.	6.	0.
9	5.7	0.0	0.0	0.0	0.0	.3	12.0	0.0	0.	0.	0.
10	5.8	10.6	0.0	0.0	0.0	.4	26.0	50.0	6.	15.	0.
11	5.7	10.8	0.0	0.0	0.0	.3	11.0	45.0	6.	2.	0.
12	5.7	0.0	0.0	0.0	0.0	.3	14.0	0.0	0.	0.	0.
13	5.7	10.6	0.0	0.0	0.0	.4	22.5	45.0	5.	8.	0.
14	5.8	10.8	0.0	0.0	0.0	.5	19.0	66.0	7.	3.	0.
15	5.8	10.5	0.0	0.0	0.0	.4	15.0	42.0	4.	2.	0.
16	5.8	0.0	0.0	0.0	0.0	.3	15.5	0.0	0.	0.	0.
17	5.6	0.0	0.0	0.0	0.0	.3	9.5	0.0	0.	0.	0.
18	5.7	0.0	0.0	0.0	0.0	.3	16.0	0.0	0.	0.	0.
19	5.8	10.4	0.0	0.0	0.0	.3	23.0	37.0	2.	2.	0.
20	5.3	0.0	0.0	0.0	0.0	.2	6.0	0.0	0.	0.	0.
MEAN	5.7	10.6	0.0	0.0	0.0	.4	16.2	50.6	6.	10.	0.
STD DEV	.1	.1	0.0	0.0	0.0	.1	5.8	9.6	2.	11.	0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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       AGROPYRON SPICATUM    STUDY AREA HORSE CRK          DATE 09  JULY     1982
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    PLANT  PHENOLOGICAL        CLUMP                MAX. MAX.  MAX.  NO.   NO.   NO.
     NO.   STAGE SCORE  LGTH.  WIDTH   DIAM. LEAF  LEAF  SPK   SPL/  REPR  VEG
           VEG.  REPR.                       WIDTH HGHT  HGHT  CULM  CULM  CULM
    *****************************************************************************
      1    6.3   13.2   0.0    0.0     0.0  0.0    29.0  55.0  0.    0.    0.
      2    6.2   13.4   0.0    0.0     0.0  0.0    32.0  51.0  0.    0.    0.
      3    6.3   13.6   0.0    0.0     0.0  0.0    32.0  65.0  0.    0.    0.
      4    6.3   13.7   0.0    0.0     0.0  0.0    21.0  32.0  0.    0.    0.
      5    6.3   13.8   0.0    0.0     0.0  0.0    24.0  54.0  0.    0.    0.
      6    6.4   14.0   0.0    0.0     0.0  0.0    29.0  60.0  0.    0.    0.
      7    6.3   14.0   0.0    0.0     0.0  0.0    32.0  55.0  0.    0.    0.
      8    6.4   14.1   0.0    0.0     0.0  0.0    23.0  52.0  0.    0.    0.
      9    6.0    0.0   0.0    0.0     0.0  0.0    10.2   0.0  0.    0.    0.
     10    6.3   13.8   0.0    0.0     0.0  0.0    42.0  56.0  0.    0.    0.
     11    6.3   13.9   0.0    0.0     0.0  0.0    19.0  43.0  0.    0.    0.
     12    6.2   14.0   0.0    0.0     0.0  0.0    25.0  45.0  0.    0.    0.
     13    6.3   14.2   0.0    0.0     0.0  0.0    29.0  50.0  0.    0.    0.
     14    6.2   14.0   0.0    0.0     0.0  0.0    41.0  64.0  0.    0.    0.
     15    6.2   13.5   0.0    0.0     0.0  0.0    16.0  50.0  0.    0.    0.
     16    6.3    0.0   0.0    0.0     0.0  0.0    15.0   0.0  0.    0.    0.
     17    6.1    0.0   0.0    0.0     0.0  0.0    10.0   0.0  0.    0.    0.
     18    6.1    0.0   0.0    0.0     0.0  0.0    17.0   0.0  0.    0.    0.
     19    6.1   14.5   0.0    0.0     0.0  0.0    24.0  40.0  0.    0.    0.
     20    6.0    0.0   0.0    0.0     0.0  0.0     6.0   0.0  0.    0.    0.


    MEAN   6.2   13.8   0.0    0.0     0.0  0.0    23.8  51.5  0.    0.    0.

  STD DEV   .1     .3   0.0    0.0     0.0  0.0     9.8   8.8  0.    0.    0.

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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        AGROPYRON SPICATUM     STUDY AREA HORSE CRK          DATE 26  JULY     1982
       --------------------                ----------                 ------------------

     PLANT  PHENOLOGICAL         CLUMP                MAX. MAX.  MAX.  NO.   NO.   NO.
      NO.   STAGE SCORE   LGTH.  WIDTH     DIAM. LEAF  LEAF  SPK   SPL/  REPR  VEG
            VEG.  REPR.                          WIDTH HGHT  HGHT  CULM  CULM  CULM
****************************************************************************************
       1     6.2     0.0    0.0    0.0      0.0   .2   16.5   0.0  0.    0.    0.
       2     6.3    16.7    0.0    0.0      0.0   .3   15.5  47.0  0.    0.    0.
       3     6.3    16.5    0.0    0.0      0.0   .3   15.0  58.0  0.    0.    0.
       4     6.4     0.0    0.0    0.0      0.0   .2   18.0   0.0  0.    0.    0.
       5     6.3     0.0    0.0    0.0      0.0   .3   15.0   0.0  0.    0.    0.
       6     6.4    16.6    0.0    0.0      0.0   .3   16.0  46.0  0.    0.    0.
       7     6.4    16.7    0.0    0.0      0.0   .4   24.0  54.0  0.    0.    0.
       8     6.4    16.7    0.0    0.0      0.0   .3   15.0  36.0  0.    0.    0.
       9     6.4     0.0    0.0    0.0      0.0   .2   11.5   0.0  0.    0.    0.
      10     6.3    16.6    0.0    0.0      0.0   .4   22.0  64.0  0.    0.    0.
      11     6.3    16.8    0.0    0.0      0.0   .2   12.0  44.0  0.    0.    0.
      12     6.4     0.0    0.0    0.0      0.0   .2   11.0   0.0  0.    0.    0.
      13     6.3    16.7    0.0    0.0      0.0   .2   23.0  45.0  0.    0.    0.
      14     6.4    16.8    0.0    0.0      0.0   .3   18.0  63.0  0.    0.    0.
      15     6.4    16.5    0.0    0.0      0.0   .2   19.0  40.0  0.    0.    0.
      16     6.3     0.0    0.0    0.0      0.0   .3   19.5   0.0  0.    0.    0.
      17     6.4     0.0    0.0    0.0      0.0   .2    9.0   0.0  0.    0.    0.
      18     6.4     0.0    0.0    0.0      0.0   .2   14.5   0.0  0.    0.    0.
      19     6.3     0.0    0.0    0.0      0.0   .3   22.0   0.0  0.    0.    0.
      20     6.3     0.0    0.0    0.0      0.0   .2   14.0   0.0  0.    0.    0.


    MEAN     6.3    16.7    0.0    0.0      0.0   .3   16.5  49.7  0.    0.    0.

  STD DEV    .1      .1    0.0    0.0      0.0   .1    4.2   9.6  0.    0.    0.

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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      AGROPYRON SPICATUM     STUDY AREA HORSE CRK         DATE 09  AUGUST   1982
     --------------------               ----------           -----------------

   PLANT  PHENOLOGICAL         CLUMP              MAX. MAX.  MAX.  NO.   NO.   NO.
    NO.   STAGE SCORE   LGTH.  WIDTH    DIAM. LEAF  LEAF  SPK   SPL/  REPR  VEG
          VEG.  REPR.                         WIDTH HGHT  HGHT  CULM  CULM  CULM
   ****************************************************************************
     1    6.5    16.9   0.0    0.0      0.0  0.0    0.0    0.0  0.    0.    0.
     2    6.4    16.9   0.0    0.0      0.0  0.0    0.0    0.0  0.    0.    0.
     3    6.6    16.9   0.0    0.0      0.0  0.0    0.0    0.0  0.    0.    0.
     4    6.5     0.0   0.0    0.0      0.0  0.0    0.0    0.0  0.    0.    0.
     5    6.3    16.9   0.0    0.0      0.0  0.0    0.0    0.0  0.    0.    0.
     6    6.4    16.9   0.0    0.0      0.0  0.0    0.0    0.0  0.    0.    0.
     7    6.2    16.9   0.0    0.0      0.0  0.0    0.0    0.0  0.    0.    0.
     8    6.4    16.9   0.0    0.0      0.0  0.0    0.0    0.0  0.    0.    0.
     9    6.6    16.9   0.0    0.0      0.0  0.0    0.0    0.0  0.    0.    0.
    10    6.5    16.9   0.0    0.0      0.0  0.0    0.0    0.0  0.    0.    0.
    11    6.5    16.9   0.0    0.0      0.0  0.0    0.0    0.0  0.    0.    0.
    12    6.5    16.9   0.0    0.0      0.0  0.0    0.0    0.0  0.    0.    0.
    13    6.5    16.9   0.0    0.0      0.0  0.0    0.0    0.0  0.    0.    0.
    14    6.5    16.9   0.0    0.0      0.0  0.0    0.0    0.0  0.    0.    0.
    15    6.4    16.9   0.0    0.0      0.0  0.0    0.0    0.0  0.    0.    0.
    16    6.6     0.0   0.0    0.0      0.0  0.0    0.0    0.0  0.    0.    0.
    17    6.6     0.0   0.0    0.0      0.0  0.0    0.0    0.0  0.    0.    0.
    18    6.6    16.9   0.0    0.0      0.0  0.0    0.0    0.0  0.    0.    0.
    19    6.7     0.0   0.0    0.0      0.0  0.0    0.0    0.0  0.    0.    0.
    20    6.5     0.0   0.0    0.0      0.0  0.0    0.0    0.0  0.    0.    0.


   MEAN   6.5    16.9   0.0    0.0      0.0  0.0    0.0    0.0  0.    0.    0.

 STD DEV   .1      .0   0.0    0.0      0.0  0.0    0.0    0.0  0.    0.    0.

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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     AGROPYRON SPICATUM    STUDY AREA HORSE CRK         DATE 28  AUGUST   1982
    --------------------              ----------         -----------------


  PLANT  PHENOLOGICAL          CLUMP               MAX. MAX.  MAX.  NO.   NO.   NO.
   NO.   STAGE SCORE  LGTH.  WIDTH      DIAM. LEAF  LEAF  SPK   SPL/  REPR  VEG
         VEG.  REPR.                          WIDTH HGHT  HGHT  CULM  CULM  CULM
  ****************************************************************************
    1     6.7   16.9   0.0    0.0       0.0  0.0    0.0    0.0  0.    0.    0.
    2     6.7   16.8   0.0    0.0       0.0  0.0    0.0    0.0  0.    0.    0.
    3     6.7   16.9   0.0    0.0       0.0  0.0    0.0    0.0  0.    0.    0.
    4     6.9    0.0   0.0    0.0       0.0  0.0    0.0    0.0  0.    0.    0.
    5     6.6   16.8   0.0    0.0       0.0  0.0    0.0    0.0  0.    0.    0.
    6     6.8   16.9   0.0    0.0       0.0  0.0    0.0    0.0  0.    0.    0.
    7     6.8   16.9   0.0    0.0       0.0  0.0    0.0    0.0  0.    0.    0.
    8     6.8   16.9   0.0    0.0       0.0  0.0    0.0    0.0  0.    0.    0.
    9     6.7    0.0   0.0    0.0       0.0  0.0    0.0    0.0  0.    0.    0.
   10     6.7   16.9   0.0    0.0       0.0  0.0    0.0    0.0  0.    0.    0.
   11     6.5   16.9   0.0    0.0       0.0  0.0    0.0    0.0  0.    0.    0.
   12     6.5    0.0   0.0    0.0       0.0  0.0    0.0    0.0  0.    0.    0.
   13     6.6   16.9   0.0    0.0       0.0  0.0    0.0    0.0  0.    0.    0.
   14     6.6   16.8   0.0    0.0       0.0  0.0    0.0    0.0  0.    0.    0.
   15     6.4    0.0   0.0    0.0       0.0  0.0    0.0    0.0  0.    0.    0.
   16     6.5    0.0   0.0    0.0       0.0  0.0    0.0    0.0  0.    0.    0.
   17     6.5    0.0   0.0    0.0       0.0  0.0    0.0    0.0  0.    0.    0.
   18     6.5    0.0   0.0    0.0       0.0  0.0    0.0    0.0  0.    0.    0.
   19     6.5    0.0   0.0    0.0       0.0  0.0    0.0    0.0  0.    0.    0.
   20     6.5    0.0   0.0    0.0       0.0  0.0    0.0    0.0  0.    0.    0.


  MEAN    6.6   16.9   0.0    0.0       0.0  0.0    0.0    0.0  0.    0.    0.

 STD DEV   .1     .0   0.0    0.0       0.0  0.0    0.0    0.0  0.    0.    0.

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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   AGROPYRON SPICATUM     STUDY AREA OWL DRAW          DATE 01  MAY      1982
  --------------------               ----------          -----------------

PLANT  PHENOLOGICAL         CLUMP             MAX. MAX.  MAX.  NO.   NO.   NO.
  NO.  STAGE SCORE  LGTH.  WIDTH    DIAM. LEAF  LEAF  SPK   SPL/  REPR  VEG
       VEG.  REPR.                        WIDTH HGHT  HGHT  CULM  CULM  CULM
********************************************************************************
  1    4.3    0.0    0.0    0.0    0.0  0.0    4.5   0.0  0.    0.    0.
  2    4.2    0.0    0.0    0.0    0.0  0.0    5.0   0.0  0.    0.    0.
  3    3.7    0.0    0.0    0.0    0.0  0.0    7.0   0.0  0.    0.    0.
  4    4.2    0.0    0.0    0.0    0.0  0.0    4.5   0.0  0.    0.    0.
  5    4.2    0.0    0.0    0.0    0.0  0.0    7.0   0.0  0.    0.    0.
  6    3.7    0.0    0.0    0.0    0.0  0.0    5.0   0.0  0.    0.    0.
  7    3.8    0.0    0.0    0.0    0.0  0.0    8.5   0.0  0.    0.    0.
  8    4.3    0.0    0.0    0.0    0.0  0.0   10.0   0.0  0.    0.    0.
  9    3.9    0.0    0.0    0.0    0.0  0.0   10.0   0.0  0.    0.    0.
 10    4.0    0.0    0.0    0.0    0.0  0.0    7.0   0.0  0.    0.    0.
 11    3.5    0.0    0.0    0.0    0.0  0.0    8.3   0.0  0.    0.    0.
 12    3.9    0.0    0.0    0.0    0.0  0.0    6.5   0.0  0.    0.    0.
 13    4.1    0.0    0.0    0.0    0.0  0.0    5.0   0.0  0.    0.    0.
 14    4.3    0.0    0.0    0.0    0.0  0.0    5.0   0.0  0.    0.    0.
 15    4.2    0.0    0.0    0.0    0.0  0.0    5.3   0.0  0.    0.    0.
 16    4.5    0.0    0.0    0.0    0.0  0.0    5.2   0.0  0.    0.    0.
 17    4.3    0.0    0.0    0.0    0.0  0.0   10.5   0.0  0.    0.    0.
 18    4.5    0.0    0.0    0.0    0.0  0.0    6.0   0.0  0.    0.    0.
 19    4.1    0.0    0.0    0.0    0.0  0.0   11.0   0.0  0.    0.    0.
 20    4.6    0.0    0.0    0.0    0.0  0.0    7.0   0.0  0.    0.    0.


 MEAN  4.1    0.0    0.0    0.0    0.0  0.0    6.9   0.0  0.    0.    0.

STD DEV .3    0.0    0.0    0.0    0.0  0.0    2.1   0.0  0.    0.    0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS
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AGROPYRON SPICATUM STUDY AREA OWL DRAW DATE 17 MAY 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE		CLUMP			MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
	VEG.	REPR.	LGTH.	WIDTH	DIAM.						
1	4.5	0.0	5.0	3.0	8.5	.3	0.0	0.0	0.	0.	0.
2	4.5	0.0	5.0	3.0	0.0	.3	8.5	0.0	0.	0.	6.
3	4.2	0.0	0.0	0.0	0.0	.3	11.5	0.0	0.	0.	5.
4	4.5	0.0	0.0	0.0	0.0	.3	12.0	0.0	0.	0.	10.
5	4.9	0.0	0.0	0.0	0.0	.3	8.0	0.0	0.	0.	2.
6	3.9	0.0	0.0	0.0	0.0	.2	12.0	0.0	0.	0.	4.
7	3.8	0.0	0.0	0.0	0.0	.2	4.0	0.0	0.	0.	2.
8	3.8	0.0	0.0	0.0	0.0	.3	10.0	0.0	0.	0.	1.
9	4.2	0.0	0.0	0.0	0.0	.4	12.0	0.0	0.	0.	1.
10	4.9	0.0	0.0	0.0	0.0	.4	15.0	0.0	0.	0.	1.
11	4.7	0.0	0.0	0.0	0.0	.4	12.0	0.0	0.	0.	5.
12	4.9	0.0	0.0	0.0	0.0	.4	12.5	0.0	0.	0.	20.
13	4.9	0.0	0.0	0.0	0.0	.4	9.0	0.0	0.	0.	6.
14	4.5	0.0	0.0	0.0	0.0	.5	7.5	0.0	0.	0.	7.
15	4.9	0.0	0.0	0.0	0.0	.2	6.0	0.0	0.	0.	5.
16	4.2	0.0	0.0	0.0	0.0	.2	8.0	0.0	0.	0.	4.
17	4.9	0.0	0.0	0.0	0.0	.5	10.0	0.0	0.	0.	15.
18	5.9	0.0	0.0	0.0	0.0	.4	8.0	0.0	0.	0.	5.
19	4.9	0.0	0.0	0.0	0.0	.2	10.0	0.0	0.	0.	10.
20	4.8	0.0	0.0	0.0	0.0	.4	8.5	0.0	0.	0.	20.
MEAN	4.6	0.0	5.0	3.0	8.5	.3	9.7	0.0	0.	0.	7.
STD DEV	.5	0.0	0.0	0.0	0.0	.1	2.6	0.0	0.	0.	6.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SPICATUM STUDY AREA OWL DRAW DATE 01 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	5.1	0.0	0.0	0.0	0.0	.3	5.5	0.0	0.	0.	0.
2	4.9	0.0	0.0	0.0	0.0	.3	11.0	0.0	0.	0.	0.
3	5.2	0.0	0.0	0.0	0.0	.4	18.0	0.0	0.	0.	0.
4	5.2	0.0	0.0	0.0	0.0	.3	10.0	0.0	0.	0.	0.
5	5.4	0.0	0.0	0.0	0.0	.4	13.0	0.0	0.	0.	0.
6	5.1	0.0	0.0	0.0	0.0	.2	18.0	0.0	0.	0.	0.
7	5.0	0.0	0.0	0.0	0.0	.2	12.5	0.0	0.	0.	0.
8	5.2	0.0	0.0	0.0	0.0	.2	11.0	0.0	0.	0.	0.
9	4.8	0.0	0.0	0.0	0.0	.2	13.0	0.0	0.	0.	0.
10	4.9	0.0	0.0	0.0	0.0	.3	12.0	0.0	0.	0.	0.
11	5.4	0.0	0.0	0.0	0.0	.4	22.0	0.0	0.	0.	0.
12	5.2	0.0	0.0	0.0	0.0	.3	10.0	0.0	0.	0.	0.
13	5.3	0.0	0.0	0.0	0.0	.4	12.0	0.0	0.	0.	0.
14	5.3	0.0	0.0	0.0	0.0	.4	11.5	0.0	0.	0.	0.
15	5.2	0.0	9.1	0.0	0.0	.3	19.0	0.0	0.	0.	0.
16	5.0	0.0	0.0	0.0	0.0	.2	10.0	0.0	0.	0.	0.
17	5.2	0.0	0.0	0.0	0.0	.3	13.0	0.0	0.	0.	0.
18	5.1	0.0	0.0	0.0	0.0	.3	9.0	0.0	0.	0.	0.
19	5.3	0.0	0.0	0.0	0.0	.2	14.5	0.0	0.	0.	0.
20	5.3	0.0	0.0	0.0	0.0	.4	10.5	0.0	0.	0.	0.
MEAN	5.2	0.0	9.1	0.0	0.0	.3	12.8	0.0	0.	0.	0.
STD DEV	.2	0.0	0.0	0.0	0.0	.1	3.9	0.0	0.	0.	0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SPICATUM   STUDY AREA OWL DRAW   DATE 28 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	5.3	0.0	0.0	0.0	0.0	.3	7.4	0.0	0.	0.	0.
2	5.4	0.0	0.0	0.0	0.0	.3	10.3	0.0	0.	0.	0.
3	5.4	0.0	0.0	0.0	0.0	.2	12.0	0.0	0.	0.	0.
4	5.4	0.0	0.0	0.0	0.0	.2	12.0	0.0	0.	0.	0.
5	5.3	0.0	0.0	0.0	0.0	.4	16.0	0.0	0.	0.	0.
6	5.4	0.0	0.0	0.0	0.0	.2	19.0	0.0	0.	0.	0.
7	5.4	0.0	0.0	0.0	0.0	.3	12.5	0.0	0.	0.	0.
8	5.1	0.0	0.0	0.0	0.0	.2	9.0	0.0	0.	0.	0.
9	5.1	0.0	0.0	0.0	0.0	.2	14.0	0.0	0.	0.	0.
10	5.2	0.0	0.0	0.0	0.0	.2	6.5	0.0	0.	0.	0.
11	5.4	10.4	0.0	0.0	0.0	.4	21.0	37.5	7.	10.	0.
12	5.4	0.0	0.0	0.0	0.0	.4	18.0	0.0	0.	0.	0.
13	5.4	10.6	0.0	0.0	0.0	.4	12.5	28.5	7.	1.	0.
14	5.4	10.4	0.0	0.0	0.0	.4	9.0	21.0	0.	0.	0.
15	5.4	10.4	0.0	0.0	0.0	.4	13.0	34.5	6.	2.	0.
16	5.3	0.0	0.0	0.0	0.0	.3	10.5	0.0	0.	0.	0.
17	5.3	0.0	0.0	0.0	0.0	.2	11.5	0.0	0.	0.	0.
18	5.3	0.0	0.0	0.0	0.0	.3	10.0	0.0	0.	0.	0.
19	5.3	0.0	0.0	0.0	0.0	.3	13.5	0.0	0.	0.	0.
20	5.4	10.3	0.0	0.0	C.0	.3	12.0	24.0	7.	2.	0.
MEAN	5.3	10.4	0.0	0.0	0.0	.3	12.5	29.1	7.	4.	0.
STD DEV	.1	.1	0.0	0.0	0.0	.1	3.7	6.9	1.	4.	0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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        AGROPYRON SPICATUM    STUDY AREA OWL DRAW          DATE 11  JULY      1982
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     PLANT  PHENOLOGICAL          CLUMP               MAX. MAX.  MAX.  NO.   NO.   NO.
      NO.   STAGE SCORE   LGTH.  WIDTH     DIAM. LEAF  LEAF  SPK   SPL/  REPR  VEG
            VEG.  REPR.                          WIDTH HGHT  HGHT  CULM  CULM  CULM
     *****************************************************************************
       1    6.1     0.0    0.0    0.0      0.0  0.0     8.0   0.0  0.    0.    0.
       2    6.0     0.0    0.0    0.0      0.0  0.0     9.5   0.0  0.    0.    0.
       3    6.2     0.0    0.0    0.0      0.0  0.0    13.0   0.0  0.    0.    0.
       4    6.1     0.0    0.0    0.0      0.0  0.0    12.0   0.0  0.    0.    0.
       5    6.0     0.0    0.0    0.0      0.0  0.0    14.0   0.0  0.    0.    0.
       6    6.0     0.0    0.0    0.0      0.0  0.0    19.5   0.0  0.    0.    0.
       7    6.1     0.0    0.0    0.0      0.0  0.0    12.0   0.0  0.    0.    0.
       8    6.1     0.0    0.0    0.0      0.0  0.0    17.0   0.0  0.    0.    0.
       9    6.0     0.0    0.0    0.0      0.0  0.0    10.0   0.0  0.    0.    0.
      10    6.2     0.0    0.0    0.0      0.0  0.0    12.0   0.0  0.    0.    0.
      11    6.1    14.0    0.0    0.0      0.0  0.0    19.0  45.0  0.    0.    0.
      12    6.1     0.0    0.0    0.0      0.0  0.0    10.0   0.0  0.    0.    0.
      13    6.1    14.5    0.0    0.0      0.0  0.0    12.0  31.5  0.    0.    0.
      14    6.1    14.5    0.0    0.0      0.0  0.0    10.0  27.0  0.    0.    0.
      15    6.1    14.0    0.0    0.0      0.0  0.0    12.0  36.0  0.    0.    0.
      16    6.2     0.0    0.0    0.0      0.0  0.0    10.0   0.0  0.    0.    0.
      17    6.1    14.9    0.0    0.0      0.0  0.0    15.0  26.0  0.    0.    0.
      18    6.0     0.0    0.0    0.0      0.0  0.0     9.5   0.0  0.    0.    0.
      19    6.0     0.0    0.0    0.0      0.0  0.0    15.0   0.0  0.    0.    0.
      20    6.1    14.9    0.0    0.0      0.0  0.0    15.0  25.0  0.    0.    0.


     MEAN   6.1    14.5    0.0    0.0      0.0  0.0    12.7  31.8  0.    0.    0.

  STD DEV    .1      .4    0.0    0.0      0.0  0.0     3.2   7.7  0.    0.    0.

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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      AGROPYRON SPICATUM    STUDY AREA OWL DRAW          DATE 10  AUGUST   1982
     --------------------              ----------           -----------------

  PLANT  PHENOLOGICAL        CLUMP               MAX. MAX.  MAX.  NO.   NO.   NO.
   NO.   STAGE SCORE  LGTH.  WIDTH    DIAM. LEAF  LEAF  SPK   SPL/  REPR  VEG
         VEG.  REPR.                        WIDTH HGHT  HGHT ;CULM  CULM  CULM
*************************************************************************************
    1     6.5    0.0   0.0    0.0      0.0  0.0    0.0   0.0  0.    0.    0.
    2     6.4    0.0   0.0    0.0      0.0  0.0    0.0   0.0  0.    0.    0.
    3     6.6    0.0   0.0    0.0      0.0  0.0    0.0   0.0  0.    0.    0.
    4     6.2    0.0   0.0    0.0      0.0  0.0    0.0   0.0  0.    0.    0.
    5     6.3    0.0   0.0    0.0      0.0  0.0    0.0   0.0  0.    0.    0.
    6     6.2    0.0   0.0    0.0      0.0  0.0    0.0   0.0  0.    0.    0.
    7     6.2    0.0   0.0    0.0      0.0  0.0    0.0   0.0  0.    0.    0.
    8     6.6    0.0   0.0    0.0      0.0  0.0    0.0   0.0  0.    0.    0.
    9     6.2    0.0   0.0    0.0      0.0  0.0    0.0   0.0  0.    0.    0.
   10     6.2    0.0   0.0    0.0      0.0  0.0    0.0   0.0  0.    0.    0.
   11     6.3   16.6   0.0    0.0      0.0  0.0    0.0   0.0  0.    0.    0.
   12     6.4    0.0   0.0    0.0      0.0  0.0    0.0   0.0  0.    0.    0.
   13     6.4   16.5   0.0    0.0      0.0  0.0    0.0   0.0  0.    0.    0.
   14     6.3   16.6   0.0    0.0      0.0  0.0    0.0   0.0  0.    0.    0.
   15     6.4   16.5   0.0    0.0      0.0  0.0    0.0   0.0  0.    0.    0.
   16     6.4    0.0   0.0    0.0      0.0  0.0    0.0   0.0  0.    0.    0.
   17     6.5    0.0   0.0    0.0      0.0  0.0    0.0   0.0  0.    0.    0.
   18     6.3    0.0   0.0    0.0      0.0  0.0    0.0   0.0  0.    0.    0.
   19     6.2    0.0   0.0    0.0      0.0  0.0    0.0   0.0  0.    0.    0.
   20     6.4   16.7   0.0    0.0      0.0  0.0    0.0   0.0  0.    0.    0.


  MEAN    6.3   16.6   0.0    0.0      0.0  0.0    0.0   0.0  0.    0.    0.

STD DEV    .1     .1   0.0    0.0      0.0  0.0    0.0   0.0  0.    0.    0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS
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     AGROPYRON SPICATUM    STUDY AREA OWL DRAW           DATE 27  AUGUST   1982
     ------------------                ----------             ----------------

  PLANT  PHENOLOGICAL          CLUMP              MAX. MAX.  MAX.  NO.   NO.   NO.
   NO.   STAGE SCORE  LGTH.  WIDTH    DIAM. LEAF  LEAF  SPK   SPL/  REPR  VEG
         VEG.  REPR.                        WIDTH HGHT  HGHT  CULM  CULM  CULM
********************************************************************************
    1     6.2    0.0   0.0    0.0     0.0  0.0    0.0    0.0  0.    0.    0.
    2     6.5    0.0   0.0    0.0     0.0  0.0    0.0    0.0  0.    0.    0.
    3     6.4    0.0   0.0    0.0     0.0  0.0    0.0    0.0  0.    0.    0.
    4     6.3    0.0   0.0    0.0     0.0  0.0    0.0    0.0  0.    0.    0.
    5     6.3    0.0   0.0    0.0     0.0  0.0    0.0    0.0  0.    0.    0.
    6     6.3    0.0   0.0    0.0     0.0  0.0    0.0    0.0  0.    0.    0.
    7     6.4    0.0   0.0    0.0     0.0  0.0    0.0    0.0  0.    0.    0.
    8     6.3    0.0   0.0    0.0     0.0  0.0    0.0    0.0  0.    0.    0.
    9     6.3    0.0   0.0    0.0     0.0  0.0    0.0    0.0  0.    0.    0.
   10     6.5    0.0   0.0    0.0     0.0  0.0    0.0    0.0  0.    0.    0.
   11     6.4   16.9   0.0    0.0     0.0  0.0    0.0    0.0  0.    0.    0.
   12     6.5    0.0   0.0    0.0     0.0  0.0    0.0    0.0  0.    0.    0.
   13     6.3   16.9   0.0    0.0     0.0  0.0    0.0    0.0  0.    0.    0.
   14     6.3   16.8   0.0    0.0     0.0  0.0    0.0    0.0  0.    0.    0.
   15     6.4   16.9   0.0    0.0     0.0  0.0    0.0    0.0  0.    0.    0.
   16     6.4    0.0   0.0    0.0     0.0  0.0    0.0    0.0  0.    0.    0.
   17     6.4   16.9   0.0    0.0     0.0  0.0    0.0    0.0  0.    0.    0.
   18     6.3    0.0   0.0    0.0     0.0  0.0    0.0    0.0  0.    0.    0.
   19     6.3    0.0   0.0    0.0     0.0  0.0    0.0    0.0  0.    0.    0.
   20     6.7    0.0   0.0    0.0     0.0  0.0    0.0    0.0  0.    0.    0.


  MEAN    6.4   16.9   0.0    0.0     0.0  0.0    0.0    0.0  0.    0.    0.

STD DEV    .1     .0   0.0    0.0     0.0  0.0    0.0    0.0  0.    0.    0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS
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AGROPYRON SPICATUM   STUDY AREA RED WASH 2   DATE 29 APRIL 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	5.1	0.0	0.0	0.0	0.0	.2	8.5	0.0	0.	0.	30.
2	3.0	0.0	0.0	0.0	0.0	.2	7.6	0.0	0.	0.	0.
3	3.3	0.0	0.0	0.0	0.0	.2	7.0	0.0	0.	0.	0.
4	4.0	0.0	0.0	0.0	0.0	.2	9.0	0.0	0.	0.	0.
5	3.8	0.0	0.0	0.0	0.0	.2	11.0	0.0	0.	0.	0.
6	3.4	0.0	0.0	0.0	0.0	.3	9.0	0.0	0.	0.	0.
7	3.8	0.0	0.0	0.0	0.0	.2	4.0	0.0	0.	0.	0.
8	4.0	0.0	0.0	0.0	0.0	.2	9.0	0.0	0.	0.	0.
9	4.0	0.0	0.0	0.0	0.0	.2	9.5	0.0	0.	0.	0.
10	3.8	0.0	0.0	0.0	0.0	.2	8.0	0.0	0.	0.	0.
11	4.0	0.0	0.0	0.0	0.0	.2	5.0	0.0	0.	0.	0.
12	3.5	0.0	0.0	0.0	0.0	.2	5.0	0.0	0.	0.	0.
13	4.0	0.0	0.0	0.0	0.0	.3	5.5	0.0	0.	0.	0.
14	3.1	0.0	0.0	0.0	0.0	.3	8.1	0.0	0.	0.	0.
15	5.1	0.0	0.0	0.0	0.0	.3	11.0	0.0	0.	0.	0.
16	4.0	0.0	0.0	0.0	0.0	.2	8.0	0.0	0.	0.	0.
17	4.0	0.0	0.0	0.0	0.0	.3	10.0	0.0	0.	0.	0.
18	3.0	0.0	0.0	0.0	0.0	.2	8.0	0.0	0.	0.	0.
19	3.0	0.0	0.0	0.0	0.0	.2	5.0	0.0	0.	0.	0.
20	4.0	0.0	0.0	0.0	0.0	.3	8.5	0.0	0.	0.	0.
MEAN	3.8	0.0	0.0	0.0	0.0	.2	7.8	0.0	0.	0.	30.
STD DEV	.6	0.0	0.0	0.0	0.0	.0	2.0	0.0	0.	0.	0.

0.C = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SPICATUM   STUDY AREA RED WASH 2   DATE 20 MAY 1982

PLANT NO.	PHENOLOGICAL			CLUMP		MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
	STAGE VEG.	SCORE REPR.	LGTH.	WIDTH	DIAM.						
1	5.0	0.0	53.0	44.0	0.0	.3	19.0	0.0	0.	0.	0.
2	4.9	0.0	56.0	27.0	0.0	.3	20.5	0.0	0.	0.	0.
3	4.8	0.0	80.0	63.0	0.0	.3	13.5	0.0	0.	0.	0.
4	4.9	0.0	21.0	18.0	0.0	.4	19.5	0.0	0.	0.	0.
5	4.8	0.0	48.0	48.0	0.0	.3	20.5	0.0	0.	0.	0.
6	5.0	0.0	17.0	10.0	0.0	.4	20.5	0.0	0.	0.	0.
7	4.7	0.0	10.0	5.0	0.0	.3	11.0	0.0	0.	0.	0.
8	4.8	0.0	21.0	12.0	0.0	.3	21.5	0.0	0.	0.	0.
9	4.8	0.0	92.0	84.0	0.0	.3	18.5	0.0	0.	0.	0.
10	4.9	0.0	15.0	14.0	0.0	.2	18.5	0.0	0.	0.	0.
11	4.3	0.0	10.0	4.0	0.0	.3	16.0	0.0	0.	0.	0.
12	4.9	0.0	30.0	15.0	0.0	.3	15.0	0.0	0.	0.	0.
13	5.1	0.0	68.0	56.0	0.0	.3	21.0	0.0	0.	0.	0.
14	4.7	0.0	9.0	5.0	0.0	.2	8.5	0.0	0.	0.	0.
15	4.8	0.0	8.0	7.0	0.0	.4	16.0	0.0	0.	0.	0.
16	5.2	0.0	24.0	20.0	0.0	.3	19.0	0.0	0.	0.	0.
17	4.9	0.0	24.0	22.0	0.0	.4	22.5	0.0	0.	0.	0.
18	4.8	0.0	15.0	12.0	0.0	.3	14.0	0.0	0.	0.	0.
19	4.5	0.0	17.0	14.0	0.0	.2	15.0	0.0	0.	0.	0.
20	4.8	0.0	23.0	14.0	0.0	.3	21.5	0.0	0.	0.	0.
MEAN	4.8	0.0	32.1	24.7	0.0	.3	17.6	0.0	0.	0.	0.
STD DEV	.2	0.0	25.2	22.3	0.0	.1	3.8	0.0	0.	0.	0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SPICATUM   STUDY AREA RED WASH 2   DATE 02 JUNE 1982

PLANT	PHENOLOGICAL STAGE SCORE		CLUMP			MAX.	MAX.	MAX.	NO.	NO.	NO.
NO.	VEG.	REPR.	LGTH.	WIDTH	DIAM.	LEAF WIDTH	LEAF HGHT	SPK HGHT	SPL/ CULM	REPR CULM	VEG CULM
1	5.4	0.0	0.0	0.0	0.0	.4	29.0	0.0	0.	0.	0.
2	4.8	0.0	0.0	0.0	0.0	.4	30.0	0.0	0.	0.	0.
3	4.6	0.0	0.0	0.0	0.0	.3	31.0	0.0	0.	0.	0.
4	4.8	0.0	0.0	0.0	0.0	.4	33.5	0.0	0.	0.	0.
5	4.5	0.0	0.0	0.0	0.0	.4	33.0	0.0	0.	0.	0.
6	4.4	0.0	0.0	0.0	0.0	.4	22.0	0.0	0.	0.	0.
7	4.2	0.0	0.0	0.0	0.0	.3	22.0	0.0	0.	0.	0.
8	4.9	0.0	0.0	0.0	0.0	.4	24.5	0.0	0.	0.	0.
9	5.3	0.0	0.0	0.0	0.0	.5	27.0	0.0	0.	0.	0.
10	4.8	0.0	0.0	0.0	0.0	.5	22.5	0.0	0.	0.	0.
11	4.7	0.0	0.0	0.0	0.0	.4	15.0	0.0	0.	0.	0.
12	4.8	0.0	0.0	0.0	0.0	.4	18.0	0.0	0.	0.	0.
13	5.3	0.0	0.0	0.0	0.0	.4	23.0	0.0	0.	0.	0.
14	4.9	0.0	0.0	0.0	0.0	.4	30.0	0.0	0.	0.	0.
15	5.5	0.0	0.0	0.0	0.0	.3	23.5	0.0	0.	0.	0.
16	4.6	0.0	0.0	0.0	0.0	.3	31.5	0.0	0.	0.	0.
17	5.4	0.0	0.0	0.0	0.0	.3	32.0	0.0	0.	0.	0.
18	3.8	0.0	0.0	0.0	0.0	.2	15.0	0.0	0.	0.	0.
19	5.4	0.0	0.0	0.0	0.0	.3	29.0	0.0	0.	0.	0.
20	4.9	0.0	0.0	0.0	0.0	.3	35.0	0.0	0.	0.	0.
MEAN	4.9	0.0	0.0	0.0	0.0	.4	26.3	0.0	0.	0.	0.
STD DEV	.4	0.0	0.0	0.0	0.0	.1	6.0	0.0	0.	0.	0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SPICATUM STUDY AREA RED WASH 2 DATE 14 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	5.3	10.4	0.0	0.0	0.0	.3	22.0	24.0	0.	0.	0.
2	5.0	10.0	0.0	0.0	0.0	.3	26.0	20.0	0.	0.	0.
3	5.2	9.2	0.0	0.0	0.0	.2	22.0	0.0	0.	0.	0.
4	5.1	9.0	0.0	0.0	0.0	.3	29.0	0.0	0.	0.	0.
5	5.3	10.3	0.0	0.0	0.0	.3	35.0	0.0	0.	0.	0.
6	5.2	9.1	0.0	0.0	0.0	.3	19.0	20.0	0.	0.	0.
7	5.1	0.0	0.0	0.0	0.0	.3	22.0	0.0	0.	0.	0.
8	5.0	0.0	0.0	0.0	0.0	.4	18.0	0.0	0.	0.	0.
9	5.2	10.0	0.0	0.0	0.0	.4	24.5	25.0	0.	0.	0.
10	5.3	9.0	0.0	0.0	0.0	.4	23.0	0.0	0.	0.	0.
11	5.0	0.0	0.0	0.0	0.0	.3	14.0	0.0	0.	0.	0.
12	5.2	0.0	0.0	0.0	0.0	.4	21.0	0.0	0.	0.	0.
13	5.1	9.0	0.0	0.0	0.0	.4	24.0	0.0	0.	0.	0.
14	5.0	0.0	0.0	0.0	0.0	.4	29.0	0.0	0.	0.	0.
15	5.1	0.0	0.0	0.0	0.0	.4	27.0	0.0	0.	0.	0.
16	5.1	0.0	0.0	0.0	0.0	.4	28.0	0.0	0.	0.	0.
17	5.2	0.0	0.0	0.0	0.0	.4	29.5	0.0	0.	0.	0.
18	5.0	0.0	0.0	0.0	0.0	.3	18.0	0.0	0.	0.	0.
19	5.0	0.0	0.0	0.0	0.0	.3	15.0	0.0	0.	0.	0.
20	5.3	0.0	0.0	0.0	0.0	.4	32.0	0.0	0.	0.	0.
MEAN	5.1	9.6	0.0	0.0	0.0	.3	23.9	22.3	0.	0.	0.
STD DEV	.1	.6	0.0	0.0	0.0	.1	5.6	2.6	0.	0.	0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SPICATUM   STUDY AREA RED WASH 2   DATE 28 JUNE 1952

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	5.9	10.5	0.0	0.0	0.0	.3	30.0	32.0	0.	0.	0.
2	5.2	10.5	0.0	0.0	0.0	.3	30.0	32.0	0.	0.	0.
3	5.9	0.0	0.0	0.0	0.0	.2	0.0	30.0	0.	0.	0.
4	5.7	10.7	0.0	0.0	0.0	.3	27.5	17.5	0.	0.	0.
5	5.5	10.4	0.0	0.0	0.0	.3	42.0	38.5	0.	0.	0.
6	5.7	0.0	0.0	0.0	0.0	.3	27.5	0.0	0.	0.	0.
7	5.2	0.0	0.0	0.0	0.0	.3	25.0	0.0	0.	0.	0.
8	5.5	0.0	0.0	0.0	0.0	.3	29.0	0.0	0.	0.	0.
9	5.6	10.3	0.0	0.0	0.0	.3	30.0	35.0	0.	0.	0.
10	5.7	10.4	0.0	0.0	0.0	.3	26.0	37.0	0.	0.	0.
11	5.2	0.0	0.0	0.0	0.0	.2	22.0	0.0	0.	0.	0.
12	5.1	0.0	0.0	0.0	0.0	.2	21.0	0.0	0.	0.	0.
13	5.5	10.3	0.0	0.0	0.0	.3	26.0	17.0	0.	0.	0.
14	5.9	10.4	0.0	0.0	0.0	.3	22.0	36.0	0.	0.	0.
15	5.9	0.0	0.0	0.0	0.0	.3	25.0	0.0	0.	0.	0.
16	5.4	10.6	0.0	0.0	0.0	.3	26.5	23.0	0.	0.	0.
17	5.5	10.4	0.0	0.0	0.0	.3	33.0	38.0	0.	0.	0.
18	5.7	10.5	0.0	0.0	0.0	.3	18.0	27.0	0.	0.	0.
19	5.6	10.5	0.0	0.0	0.0	.3	27.0	37.0	0.	0.	0.
20	5.8	10.9	0.0	0.0	0.0	.3	27.0	26.0	0.	0.	0.
MEAN	5.6	10.5	0.0	0.0	0.0	.3	27.1	30.4	0.	0.	0.
STD DEV	.3	.2	0.0	0.0	0.0	.0	5.1	7.3	0.	0.	0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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    AGROPYRON SPICATUM    STUDY AREA RED WASH 2         DATE 11  JULY     1982
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  PLANT  PHENOLOGICAL         CLUMP              MAX. MAX.  MAX.  NO.   NO.   NO.
   NO.   STAGE SCORE  LGTH.  WIDTH   DIAM. LEAF  LEAF  SPK   SPL/  REPR  VEG
         VEG.  REPR.                       WIDTH HGHT  HGHT  CULM  CULM  CULM
*************************************************************************************
    1     6.3   11.0   0.0    0.0    0.0   .2    33.0  34.0  0.    0.    0.
    2     6.4   11.7   0.0    0.0    0.0   .2    26.0  36.5  0.    0.    0.
    3     6.3   11.5   0.0    0.0    0.0   .2    31.0  36.0  0.    0.    0.
    4     6.4   11.7   0.0    0.0    0.0   .2    34.0  50.0  0.    0.    0.
    5     6.4   11.6   0.0    0.0    0.0   .2    36.0  46.0  0.    0.    0.
    6     6.4    0.0   0.0    0.0    0.0   .2    28.0   0.0  0.    0.    0.
    7     6.4    0.0   0.0    0.0    0.0   .2    25.0   0.0  0.    0.    0.
    8     6.3   11.5   0.0    0.0    0.0   .2    20.0  19.0  0.    0.    0.
    9     6.3   11.5   0.0    0.0    0.0   .2    24.0  38.0  0.    0.    0.
   10     6.3    0.0   0.0    0.0    0.0   .2    29.0   0.0  0.    0.    0.
   11     6.3    0.0   0.0    0.0    0.0   .2    22.0   0.0  0.    0.    0.
   12     6.3    0.0   0.0    0.0    0.0   .2    23.0   0.0  0.    0.    0.
   13     6.4   11.9   0.0    0.0    0.0   .2    35.0  27.0  0.    0.    0.
   14     6.3   11.9   0.0    0.0    0.0   .2    42.0  51.0  0.    0.    0.
   15     6.3    0.0   0.0    0.0    0.0   .2    26.5   0.0  0.    0.    0.
   16     6.4    0.0   0.0    0.0    0.0   .2    29.0   0.0  0.    0.    0.
   17     6.4   11.9   0.0    0.0    0.0   .2    35.0  40.0  0.    0.    0.
   18     6.3   11.5   0.0    0.0    0.0   .2    25.0  35.0  0.    0.    0.
   19     6.1   11.5   0.0    0.0    0.0   .2    20.0  34.0  0.    0.    0.
   20     6.3    0.0   0.0    0.0    0.0   .2    34.0   0.0  0.    0.    0.


  MEAN    6.3   11.6   0.0    0.0    0.0   .2    28.9  37.2  0.    0.    0.

STD DEV    .1     .3   0.0    0.0    0.0   .0     6.0   9.1  0.    0.    0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS
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     AGROPYRON SPICATUM    STUDY AREA RED WASH 2         DATE 25  JULY     1982
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  PLANT  PHENOLOGICAL         CLUMP                 MAX. MAX.  MAX.  NO.   NO.   NO.
   NO.   STAGE SCORE  LGTH.  WIDTH    DIAM. LEAF   LEAF  SPK   SPL/  REPR  VEG
         VEG.  REPR.                        WIDTH  HGHT  HGHT  CULM  CULM  CULM
  ***************************************************************************
    1    6.4    16.5   0.0    0.0      0.0  0.0    30.0  28.5  0.    0.    0.
    2    6.4    16.5   0.0    0.0      0.0  0.0    32.0  36.0  0.    0.    0.
    3    6.3    16.5   0.0    0.0      0.0  0.0    23.0  35.0  0.    0.    0.
    4    6.4    16.5   0.0    0.0      0.0  0.0    27.0  48.0  0.    0.    0.
    5    6.4    16.5   0.0    0.0      0.0  0.0    34.0  48.0  0.    0.    0.
    6    6.4     0.0   0.0    0.0      0.0  0.0    20.0   0.0  0.    0.    0.
    7    6.4     0.0   0.0    0.0      0.0  0.0    18.0   0.0  0.    0.    0.
    8    6.4    15.5   0.0    0.0      0.0  0.0    23.0  21.0  0.    0.    0.
    9    6.4    16.5   0.0    0.0      0.0  0.0    24.0  36.5  0.    0.    0.
   10    6.5     0.0   0.0    0.0      0.0  0.0    22.0   0.0  0.    0.    0.
   11    6.5     0.0   0.0    0.0      0.0  0.0    17.0   0.0  0.    0.    0.
   12    6.5     0.0   0.0    0.0      0.0  0.0    18.0   0.0  0.    0.    0.
   13    6.4    16.3   0.0    0.0      0.0  0.0    21.0  31.0  0.    0.    0.
   14    6.4    16.1   0.0    0.0      0.0  0.0    33.0  50.5  0.    0.    0.
   15    6.5     0.0   0.0    0.0      0.0  0.0    27.0   0.0  0.    0.    0.
   16    6.4     0.0   0.0    0.0      0.0  0.0    33.0   0.0  0.    0.    0.
   17    6.4    16.5   0.0    0.0      0.0  0.0    25.0  44.0  0.    0.    0.
   18    6.4     0.0   0.0    0.0      0.0  0.0    19.0   0.0  0.    0.    0.
   19    6.5     0.0   0.0    0.0      0.0  0.0    22.0   0.0  0.    0.    0.
   20    6.4     0.0   0.0    0.0      0.0  0.0    33.0   0.0  0.    0.    0.


  MEAN   6.4    16.3   0.0    0.0      0.0  0.0    25.1  37.9  0.    0.    0.

STD DEV   .1      .3   0.0    0.0      0.0  0.0     5.7   9.6  0.    0.    0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS
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AGROPYRON SPICATUM   STUDY AREA RED WASH 2   DATE 10 AUGUST 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
1	6.5	16.8	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
2	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
3	6.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
4	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
5	6.5	16.9	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
6	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
7	6.5	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
8	6.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
9	6.4	16.8	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
10	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
11	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
12	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
13	6.6	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
14	6.5	16.7	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
15	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
16	6.6	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
17	6.5	16.8	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
18	6.5	16.8	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
19	6.5	16.8	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
20	6.6	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
MEAN	6.5	17.2	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
STD DEV	.1	.6	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA NOVA STUDY AREA HORSE CRK DATE 30 APRIL 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.2	0.0	18.5	0.0	0.0	0.0	0.	0.	0.0	0.0
2	3.3	0.0	15.0	0.0	0.0	0.0	0.	0.	0.0	0.0
3	3.2	0.0	10.0	0.0	0.0	0.0	0.	0.	0.0	0.0
4	3.3	0.0	32.5	0.0	0.0	0.0	0.	0.	0.0	0.0
5	3.2	0.0	23.5	0.0	0.0	0.0	0.	0.	0.0	0.0
6	3.3	0.0	24.0	0.0	0.0	0.0	0.	0.	0.0	0.0
7	3.2	0.0	40.0	0.0	0.0	0.0	0.	0.	0.0	0.0
8	3.3	0.0	11.5	0.0	0.0	0.0	0.	0.	0.0	0.0
9	3.3	0.0	19.0	0.0	0.0	0.0	0.	0.	0.0	0.0
10	3.3	0.0	9.0	0.0	0.0	0.0	0.	0.	0.0	0.0
11	3.2	0.0	52.0	0.0	0.0	0.0	0.	0.	0.0	0.0
12	3.1	0.0	23.0	0.0	0.0	0.0	0.	0.	0.0	0.0
13	3.3	0.0	46.0	0.0	0.0	0.0	0.	0.	0.0	0.0
14	3.3	0.0	28.0	0.0	0.0	0.0	0.	0.	0.0	0.0
15	3.2	0.0	17.0	0.0	0.0	0.0	0.	0.	0.0	0.0
16	3.3	0.0	24.0	0.0	0.0	0.0	0.	0.	0.0	0.0
17	3.1	0.0	30.0	0.0	0.0	0.0	0.	0.	0.0	0.0
18	3.3	0.0	26.5	0.0	0.0	0.0	0.	0.	0.0	0.0
19	3.1	0.0	25.0	0.0	0.0	0.0	0.	0.	0.0	0.0
20	3.2	0.0	11.0	0.0	0.0	0.0	0.	0.	0.0	0.0
MEAN	3.2	0.0	24.3	0.0	0.0	0.0	0.	0.	0.0	0.0
STD DEV	.1	0.0	11.7	0.0	0.0	0.0	0.	0.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA NOVA   STUDY AREA HORSE CRK   DATE 18 MAY 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.3	0.0	16.0	34.0	15.0	0.0	0.	0.	0.0	0.0
2	3.3	0.0	13.0	23.0	19.0	0.0	0.	0.	0.0	0.0
3	3.3	0.0	11.0	30.0	21.0	0.0	0.	0.	0.0	0.0
4	3.3	0.0	32.0	60.0	39.0	0.0	0.	0.	0.0	0.0
5	3.3	0.0	23.0	46.0	28.0	0.0	0.	0.	0.0	0.0
6	3.3	0.0	25.5	48.0	29.0	0.0	0.	0.	0.0	0.0
7	3.3	0.0	37.0	73.0	29.0	0.0	0.	0.	0.0	0.0
8	3.3	0.0	15.0	44.0	20.0	0.0	0.	0.	0.0	0.0
9	3.3	0.0	26.0	44.0	21.0	0.0	0.	0.	0.0	0.0
10	3.3	0.0	8.5	11.0	9.0	0.0	0.	0.	0.0	0.0
11	3.3	0.0	54.0	99.0	70.0	0.0	0.	0.	0.0	0.0
12	3.3	0.0	24.0	49.0	27.0	0.0	0.	0.	0.0	0.0
13	3.4	0.0	46.0	50.0	35.0	0.0	0.	0.	0.0	0.0
14	3.4	0.0	26.5	58.0	58.0	0.0	0.	0.	0.0	0.0
15	3.3	0.0	14.0	23.0	20.0	0.0	0.	0.	0.0	0.0
16	3.3	0.0	27.0	36.0	23.0	0.0	0.	0.	0.0	0.0
17	3.3	0.0	39.0	39.0	27.0	0.0	0.	0.	0.0	0.0
18	3.3	0.0	25.0	29.0	27.0	0.0	0.	0.	0.0	0.0
19	3.3	0.0	28.0	48.0	32.0	0.0	0.	0.	0.0	0.0
20	3.3	0.0	12.0	30.0	21.0	0.0	0.	0.	0.0	0.0
MEAN	3.3	0.0	25.1	43.7	28.5	0.0	0.	0.	0.0	0.0
STD DEV	.0	0.0	12.1	19.5	14.1	0.0	0.	0.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA NOVA STUDY AREA HORSE CRK DATE 02 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.7	9.1	20.0	0.0	0.0	0.0	0.	0.	0.0	10.0
2	3.7	0.0	11.0	0.0	0.0	0.0	0.	0.	0.0	0.0
3	3.6	9.1	17.0	0.0	0.0	0.0	0.	0.	0.0	4.0
4	3.7	9.1	32.0	0.0	0.0	0.0	0.	0.	0.0	4.0
5	3.6	9.1	23.0	0.0	0.0	0.0	0.	0.	0.0	3.0
6	3.6	9.2	19.5	0.0	0.0	0.0	0.	0.	0.0	6.0
7	3.5	0.0	16.0	0.0	0.0	0.0	0.	0.	0.0	0.0
8	3.6	9.1	12.5	0.0	0.0	0.0	0.	0.	0.0	5.0
9	3.6	9.1	20.0	0.0	0.0	0.0	0.	0.	0.0	2.5
10	3.6	0.0	7.5	0.0	0.0	0.0	0.	0.	0.0	0.0
11	3.7	9.2	49.6	0.0	0.0	0.0	0.	0.	0.0	6.0
12	3.6	9.1	18.0	0.0	0.0	0.0	0.	0.	0.0	3.0
13	3.6	9.0	42.0	0.0	0.0	0.0	0.	0.	0.0	0.0
14	3.6	9.1	32.0	0.0	0.0	0.0	0.	0.	0.0	6.0
15	3.6	9.1	17.0	0.0	0.0	0.0	0.	0.	0.0	2.5
16	3.6	9.1	26.0	0.0	0.0	0.0	0.	0.	0.0	4.0
17	3.6	9.1	36.0	0.0	0.0	0.0	0.	0.	0.0	3.0
18	3.6	9.1	24.0	0.0	0.0	0.0	0.	0.	0.0	3.5
19	3.6	9.1	27.0	0.0	0.0	0.0	0.	0.	0.0	2.0
20	3.6	9.2	10.0	0.0	0.0	0.0	0.	0.	0.0	8.0
MEAN	3.6	9.1	23.0	0.0	0.0	0.0	0.	0.	0.0	4.5
STD DEV	.0	.0	10.9	0.0	0.0	0.0	0.	0.	0.0	2.2

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA NOVA STUDY AREA HORSE CRK DATE 29 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.2	9.5	30.0	0.0	0.0	0.0	0.	0.	1.0	14.0
2	4.2	0.0	12.0	0.0	0.0	0.0	0.	0.	1.0	0.0
3	4.2	9.5	11.0	0.0	0.0	0.0	0.	0.	1.5	9.5
4	4.1	9.5	36.0	0.0	0.0	0.0	0.	0.	0.0	11.0
5	4.2	9.5	30.0	0.0	0.0	0.0	0.	0.	1.0	12.0
6	4.2	9.5	32.0	0.0	0.0	0.0	0.	0.	1.5	15.5
7	4.2	9.5	34.0	0.0	0.0	0.0	0.	0.	.5	8.0
8	4.3	9.5	20.0	0.0	0.0	0.0	0.	0.	2.0	11.5
9	4.2	9.5	22.0	0.0	0.0	0.0	0.	0.	1.0	7.0
10	4.1	0.0	8.0	0.0	0.0	0.0	0.	0.	0.0	0.0
11	4.2	9.5	59.0	0.0	0.0	0.0	0.	0.	1.0	16.5
12	4.1	9.4	31.0	0.0	0.0	0.0	0.	0.	0.0	12.0
13	4.1	9.4	36.0	0.0	0.0	0.0	0.	0.	0.0	8.0
14	4.3	9.5	40.0	0.0	0.0	0.0	0.	0.	2.5	21.0
15	4.1	9.5	18.5	0.0	0.0	0.0	0.	0.	0.0	9.0
16	4.2	9.5	34.5	0.0	0.0	0.0	0.	0.	0.0	12.0
17	4.2	9.4	40.0	0.0	0.0	0.0	0.	0.	1.0	11.5
18	4.2	9.5	35.0	0.0	0.0	0.0	0.	0.	1.5	15.5
19	4.1	9.4	30.0	0.0	0.0	0.0	0.	0.	0.0	10.5
20	4.1	9.5	23.0	0.0	0.0	0.0	0.	0.	0.0	18.0
MEAN	4.2	9.5	29.1	0.0	0.0	0.0	0.	0.	1.3	12.4
STD DEV	.1	.0	11.9	0.0	0.0	0.0	0.	0.	.5	3.8

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA NOVA　　STUDY AREA HORSE CRK　　DATE 09 JULY 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.2	0.0	0.0	0.0	0.0	0.0	0.	0.	1.0	0.0
2	4.2	0.0	0.0	0.0	0.0	0.0	0.	0.	.8	0.0
3	4.3	9.5	0.0	0.0	0.0	0.0	0.	0.	1.5	8.0
4	4.2	9.5	0.0	0.0	0.0	0.0	0.	0.	1.0	12.0
5	4.3	9.5	0.0	0.0	0.0	0.0	0.	0.	1.3	12.0
6	4.2	9.5	0.0	0.0	0.0	0.0	0.	0.	1.0	10.0
7	4.3	9.5	0.0	0.0	0.0	0.0	0.	0.	1.3	8.0
8	4.3	9.4	0.0	0.0	0.0	0.0	0.	0.	1.0	9.0
9	4.2	9.4	0.0	0.0	0.0	0.0	0.	0.	1.0	10.0
10	4.3	0.0	0.0	0.0	0.0	0.0	0.	0.	1.5	0.0
11	4.3	9.4	0.0	0.0	0.0	0.0	0.	0.	1.3	12.0
12	4.4	9.5	0.0	0.0	0.0	0.0	0.	0.	1.8	8.0
13	4.4	9.5	0.0	0.0	0.0	0.0	0.	0.	2.3	16.0
14	4.3	9.5	0.0	0.0	0.0	0.0	0.	0.	1.3	10.0
15	4.3	9.5	0.0	0.0	0.0	0.0	0.	0.	1.5	12.0
16	4.3	9.5	0.0	0.0	0.0	0.0	0.	0.	1.3	10.0
17	4.3	9.5	0.0	0.0	0.0	0.0	0.	0.	1.5	14.0
18	4.4	9.5	0.0	0.0	0.0	0.0	0.	0.	2.0	15.0
19	4.2	9.5	0.0	0.0	0.0	0.0	0.	0.	.8	8.0
20	4.3	9.5	0.0	0.0	0.0	0.0	0.	0.	1.5	5.0
MEAN	4.3	9.5	0.0	0.0	0.0	0.0	0.	0.	1.3	10.5
STD DEV	.1	.0	0.0	0.0	0.0	0.0	0.	0.	.4	2.9

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA NOVA STUDY AREA HORSE CRK DATE 26 JULY 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.5	9.7	27.0	0.0	0.0	0.0	0.	0.	2.0	21.0
2	4.5	9.7	25.0	0.0	0.0	0.0	0.	0.	2.0	16.0
3	4.6	9.7	9.0	0.0	0.0	0.0	0.	0.	3.0	11.0
4	4.4	9.7	35.0	0.0	0.0	0.0	0.	0.	1.5	17.0
5	4.4	9.7	34.0	0.0	0.0	0.0	0.	0.	1.5	15.0
6	4.3	9.7	27.0	0.0	0.0	0.0	0.	0.	1.5	12.0
7	4.4	9.7	46.0	0.0	0.0	0.0	0.	0.	2.0	12.5
8	4.6	9.7	20.5	0.0	0.0	0.0	0.	0.	1.5	11.0
9	4.5	9.7	28.5	0.0	0.0	0.0	0.	0.	2.5	13.0
10	4.4	0.0	5.5	0.0	0.0	0.0	0.	0.	1.5	0.0
11	4.6	9.7	63.0	0.0	0.0	0.0	0.	0.	1.5	18.0
12	4.4	9.7	32.0	0.0	0.0	0.0	0.	0.	2.0	15.0
13	4.4	9.6	42.0	0.0	0.0	0.0	0.	0.	2.0	11.5
14	4.6	9.7	38.0	0.0	0.0	0.0	0.	0.	1.0	20.0
15	4.4	9.7	26.0	0.0	0.0	0.0	0.	0.	2.0	12.0
16	4.5	9.7	36.0	0.0	0.0	0.0	0.	0.	3.0	18.0
17	4.4	9.7	38.0	0.0	0.0	0.0	0.	0.	2.0	10.0
18	4.6	9.7	37.0	0.0	0.0	0.0	0.	0.	1.5	19.0
19	4.4	9.7	36.0	0.0	0.0	0.0	0.	0.	2.0	10.0
20	4.4	9.7	25.0	0.0	0.0	0.0	0.	0.	2.0	18.0
MEAN	4.5	9.7	31.5	0.0	0.0	0.0	0.	0.	1.9	14.7
STD DEV	.1	.0	12.5	0.0	0.0	0.0	0.	0.	.5	3.6

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMISIA NOVA            STUDY AREA HORSE CRK            DATE 09  AUGUST   1982
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
         VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                  LNGTH LNGTH
*********************************************************************************
    1      4.6   0.0     0.0    0.0    0.0    0.0   0.        0.     1.5   0.0
    2      4.5   0.0     0.0    0.0    0.0    0.0   0.        0.      .9   0.0
    3      4.6   0.0     0.0    0.0    0.0    0.0   0.        0.     2.0   0.0
    4      4.6   9.8     0.0    0.0    0.0    0.0   0.        0.     1.5   8.0
    5      4.5   9.8     0.0    0.0    0.0    0.0   0.        0.     1.0  10.0
    6      4.5   9.8     0.0    0.0    0.0    0.0   0.        0.      .9   8.0
    7      4.6   9.7     0.0    0.0    0.0    0.0   0.        0.     1.3   8.0
    8      4.6   9.7     0.0    0.0    0.0    0.0   0.        0.     2.0   8.5
    9      4.6   9.8     0.0    0.0    0.0    0.0   0.        0.     1.0   9.0
   10      4.6   0.0     0.0    0.0    0.0    0.0   0.        0.     1.0   0.0
   11      4.6   9.8     0.0    0.0    0.0    0.0   0.        0.     2.0  12.0
   12      4.6   9.8     0.0    0.0    0.0    0.0   0.        0.     1.5  10.0
   13      4.6   9.7     0.0    0.0    0.0    0.0   0.        0.     2.0   7.5
   14      4.6   9.8     0.0    0.0    0.0    0.0   0.        0.     2.0  13.0
   15      4.6   9.8     0.0    0.0    0.0    0.0   0.        0.     1.5   8.0
   16      4.6   9.8     0.0    0.0    0.0    0.0   0.        0.     1.5   9.0
   17      4.6   9.8     0.0    0.0    0.0    0.0   0.        0.     1.5  10.0
   18      4.6   9.8     0.0    0.0    0.0    0.0   0.        0.     2.0  12.0
   19      4.6   9.8     0.0    0.0    0.0    0.0   0.        0.     1.0   8.0
   20      4.6   9.7     0.0    0.0    0.0    0.0   0.        0.     1.0  14.0


   MEAN  4.6     9.8     0.0    0.0    0.0    0.0   0.        0.     1.5   9.7

 STD DEV   .0     .0     0.0    0.0    0.0    0.0   0.        0.      .4   2.0

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA NOVA            STUDY AREA HORSE CRK          , DATE 28  AUGUST   1982
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
        VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                 LNGTH LNGTH
*****************************************************************************
   1     4.6   0.0    0.0    0.0    0.0    0.0   0.       0.     1.0   0.0
   2     4.5   0.0    0.0    0.0    0.0    0.0   0.       0.      .8   0.0
   3     4.5   0.0    0.0    0.0    0.0    0.0   0.       0.      .9   0.0
   4     4.5   9.8    0.0    0.0    0.0    0.0   0.       0.      .9  12.0
   5     4.6   9.9    0.0    0.0    0.0    0.0   0.       0.     1.0  15.0
   6     4.5   9.9    0.0    0.0    0.0    0.0   0.       0.      .9  12.0
   7     4.4   0.0    0.0    0.0    0.0    0.0   0.       0.      .4   0.0
   8     4.6   9.8    0.0    0.0    0.0    0.0   0.       0.     1.0  10.0
   9     4.6   9.9    0.0    0.0    0.0    0.0   0.       0.      .9  10.0
  10     4.6   0.0    0.0    0.0    0.0    0.0   0.       0.     1.3   0.0
  11     4.7   9.8    0.0    0.0    0.0    0.0   0.       0.     1.5  15.0
  12     4.6   9.9    0.0    0.0    0.0    0.0   0.       0.     1.0  12.0
  13     4.6   9.8    0.0    0.0    0.0    0.0   0.       0.      .9  10.0
  14     4.7   9.8    0.0    0.0    0.0    0.0   0.       0.     1.8  16.0
  15     4.7   9.8    0.0    0.0    0.0    0.0   0.       0.     1.3  12.0
  16     4.7   9.9    0.0    0.0    0.0    0.0   0.       0.     1.3  14.0
  17     4.6   9.8    0.0    0.0    0.0    0.0   0.       0.     1.0  12.0
  18     4.6   9.9    0.0    0.0    0.0    0.0   0.       0.     1.0  14.0
  19     4.3   9.8    0.0    0.0    0.0    0.0   0.       0.      .5   9.0
  20     4.6   9.7    0.0    0.0    0.0    0.0   0.       0.     1.0  12.0

   MEAN  4.6   9.8    0.0    0.0    0.0    0.0   0.       0.     1.0  12.3

 STD DEV  .1    .1    0.0    0.0    0.0    0.0   0.       0.      .3   2.1

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA NOVA          STUDY AREA HORSE CRK          DATE 17  SEPT      1982
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
        VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                 LNGTH LNGTH
*****************************************************************************
   1    5.1   0.0     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
   2    5.0   0.0     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
   3    5.0   0.0     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
   4    5.1  10.8     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
   5    5.1  10.2     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
   6    5.0  10.1     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
   7    5.1  10.0     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
   8    5.1  10.2     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
   9    5.0  10.0     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
  10    5.1   0.0     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
  11    5.1  10.0     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
  12    5.1  10.3     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
  13    5.0  10.0     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
  14    5.1  10.2     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
  15    5.1  10.3     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
  16    5.1  10.2     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
  17    5.0  10.6     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
  18    5.2  11.4     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
  19    5.2  10.8     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
  20    5.2  10.4     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0


   MEAN 5.1  10.3     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0

STD DEV  .1    .4     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA NOVA             STUDY AREA OWL DRAW            DATE 01  MAY       1982
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
        VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                 LNGTH LNGTH
******************************************************************************
    1     3.3   0.0   10.0   0.0    0.0    0.0    0.      0.     0.0   0.0
    2     3.1   0.0   10.5   0.0    0.0    0.0    0.      0.     0.0   0.0
    3     3.2   0.0   19.0   0.0    0.0    0.0    0.      0.     0.0   0.0
    4     3.2   0.0   11.5   0.0    0.0    0.0    0.      0.     0.0   0.0
    5     2.9   0.0    8.0   0.0    0.0    0.0    0.      0.     0.0   0.0
    6     3.2   0.0    9.0   0.0    0.0    0.0    0.      0.     0.0   0.0
    7     3.2   0.0   18.5   0.0    0.0    0.0    0.      0.     0.0   0.0
    8     3.1   0.0   11.5   0.0    0.0    0.0    0.      0.     0.0   0.0
    9     2.9   0.0   18.0   0.0    0.0    0.0    0.      0.     0.0   0.0
   10     2.6   0.0   15.0   0.0    0.0    0.0    0.      0.     0.0   0.0
   11     2.6   0.0    6.5   0.0    0.0    0.0    0.      0.     0.0   0.0
   12     2.6   0.0    7.5   0.0    0.0    0.0    0.      0.     0.0   0.0
   13     2.6   0.0   12.5   0.0    0.0    0.0    0.      0.     0.0   0.0
   14     2.6   0.0   13.5   0.0    0.0    0.0    0.      0.     0.0   0.0
   15     2.7   0.0   14.0   0.0    0.0    0.0    0.      0.     0.0   0.0
   16     2.5   0.0    7.0   0.0    0.0    0.0    0.      0.     0.0   0.0
   17     2.5   0.0   10.0   0.0    0.0    0.0    0.      0.     0.0   0.0
   18     2.5   0.0   16.0   0.0    0.0    0.0    0.      0.     0.0   0.0
   19     3.0   0.0   13.0   0.0    0.0    0.0    0.      0.     0.0   0.0
   20     3.0   0.0    7.0   0.0    0.0    0.0    0.      0.     0.0   0.0


    MEAN  2.9   0.0   11.9   0.0    0.0    0.0    0.      0.     0.0   0.0

 STD DEV   .3   0.0    3.9   0.0    0.0    0.0    0.      0.     0.0   0.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA NOVA   STUDY AREA OWL DRAW   DATE 17 MAY 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.4	0.0	7.5	21.0	18.0	0.0	0.	0.	0.0	0.0
2	3.3	0.0	16.0	18.0	13.0	0.0	0.	0.	0.0	0.0
3	3.4	0.0	9.0	15.0	10.0	0.0	0.	0.	0.0	0.0
4	3.3	0.0	10.0	52.0	31.0	0.0	0.	0.	0.0	0.0
5	3.2	0.0	6.5	23.0	12.0	0.0	0.	0.	0.0	0.0
6	3.4	0.0	9.0	15.0	8.0	0.0	0.	0.	0.0	0.0
7	3.2	0.0	15.5	33.0	22.0	0.0	0.	0.	0.0	0.0
8	3.2	0.0	11.0	24.0	16.0	0.0	0.	0.	0.0	0.0
9	3.2	0.0	15.0	48.0	24.0	0.0	0.	0.	0.0	0.0
10	3.2	0.0	12.5	42.0	22.0	0.0	0.	0.	0.0	0.0
11	3.2	0.0	11.5	25.0	13.0	0.0	0.	0.	0.0	0.0
12	3.2	0.0	8.5	21.0	9.0	0.0	0.	0.	0.0	0.0
13	3.2	0.0	17.0	34.0	32.0	0.0	0.	0.	0.0	0.0
14	3.2	0.0	13.0	21.0	14.0	0.0	0.	0.	0.0	0.0
15	3.3	0.0	14.0	60.0	33.0	0.0	0.	0.	0.0	0.0
16	3.2	0.0	10.0	19.0	15.0	0.0	0.	0.	0.0	0.0
17	3.4	0.0	10.0	34.0	22.0	0.0	0.	0.	0.0	0.0
18	3.3	0.0	19.0	49.0	37.0	0.0	0.	0.	0.0	0.0
19	3.3	0.0	12.0	29.0	17.0	0.0	0.	0.	0.0	0.0
20	3.3	0.0	7.0	13.0	8.0	0.0	0.	0.	0.0	0.0
MEAN	3.3	0.0	11.7	29.8	18.8	0.0	0.	0.	0.0	0.0
STD DEV	.1	0.0	3.5	13.8	8.8	0.0	0.	0.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA NOVA STUDY AREA OWL DRAW DATE 01 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.4	9.2	8.0	0.0	0.0	0.0	0.	0.	0.0	0.0
2	3.3	9.1	10.5	0.0	0.0	0.0	0.	0.	0.0	0.0
3	3.4	9.1	13.0	0.0	0.0	0.0	0.	0.	0.0	0.0
4	3.4	9.1	9.5	0.0	0.0	0.0	0.	0.	0.0	0.0
5	3.4	9.2	6.4	0.0	0.0	0.0	0.	0.	0.0	0.0
6	3.4	9.2	7.0	0.0	0.0	0.0	0.	0.	0.0	0.0
7	3.3	9.1	17.0	0.0	0.0	0.0	0.	0.	0.0	0.0
8	3.3	9.0	10.0	0.0	0.0	0.0	0.	0.	0.0	0.0
9	3.3	9.1	7.5	0.0	0.0	0.0	0.	0.	0.0	0.0
10	3.3	0.0	13.0	0.0	0.0	0.0	0.	0.	0.0	0.0
11	3.3	9.1	15.0	0.0	0.0	0.0	0.	0.	0.0	0.0
12	3.3	0.0	8.0	0.0	0.0	0.0	0.	0.	0.0	0.0
13	3.4	9.2	11.5	0.0	0.0	0.0	0.	0.	0.0	0.0
14	3.3	0.0	9.0	0.0	0.0	0.0	0.	0.	0.0	0.0
15	3.4	9.2	13.0	0.0	0.0	0.0	0.	0.	0.0	0.0
16	3.3	9.0	6.0	0.0	0.0	0.0	0.	0.	0.0	0.0
17	3.4	9.0	9.5	0.0	0.0	0.0	0.	0.	0.0	0.0
18	3.4	9.1	17.0	0.0	0.0	0.0	0.	0.	0.0	0.0
19	3.3	9.0	11.0	0.0	0.0	0.0	0.	0.	0.0	0.0
20	3.3	0.0	6.0	0.0	0.0	0.0	0.	0.	0.0	0.0
MEAN	3.3	9.1	10.4	0.0	0.0	0.0	0.	0.	0.0	0.0
STD DEV	.1	.1	3.4	0.0	0.0	0.0	0.	0.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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 ARTEMISIA NOVA              STUDY AREA OWL DRAW             DATE 28  JUNE      1982
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  PLANT PHENOLOGICAL   PLANT   PLANT   PLANT   PLANT   PLANT    DEAD     NEW    NEW
  NO.   STAGE SCORE    HGHT    LNGTH   WIDTH   DIAM    AGE      BRANCH   VEG.   SEED
          VEG.  REPR.                                  CLASS    PERCENT  TWIG   STALK
                                                                         LNGTH  LNGTH
*******************************************************************************************
   1      4.0   0.0     9.0     0.0     0.0     0.0    0.         0.     0.0    0.0
   2      3.9   0.0    11.5     0.0     0.0     0.0    0.         0.     0.0    0.0
   3      3.9   0.0    12.5     0.0     0.0     0.0    0.         0.     0.0    0.0
   4      3.8   0.0     8.5     0.0     0.0     0.0    0.         0.     0.0    0.0
   5      4.0   0.0     7.5     0.0     0.0     0.0    0.         0.     0.0    0.0
   6      4.1   0.0     8.8     0.0     0.0     0.0    0.         0.     0.0    0.0
   7      4.1   9.4    19.5     0.0     0.0     0.0    0.         0.     0.0    5.0
   8      4.1   9.3    10.5     0.0     0.0     0.0    0.         0.     0.0    3.0
   9      3.8   9.3     9.5     0.0     0.0     0.0    0.         0.     0.0    2.5
  10      3.9   0.0    12.0     0.0     0.0     0.0    0.         0.     0.0    0.0
  11      4.0   0.0    10.5     0.0     0.0     0.0    0.         0.     0.0    0.0
  12      3.9   0.0     7.5     0.0     0.0     0.0    0.         0.     0.0    0.0
  13      4.0   0.0    13.5     0.0     0.0     0.0    0.         0.     0.0    0.0
  14      3.9   0.0     5.0     0.0     0.0     0.0    0.         0.     0.0    0.0
  15      4.1   9.4    18.5     0.0     0.0     0.0    0.         0.     0.0    7.0
  16      3.9   9.3     7.0     0.0     0.0     0.0    0.         0.     0.0    3.0
  17      4.0   9.3     9.0     0.0     0.0     0.0    0.         0.     0.0    4.0
  18      3.9   0.0    16.5     0.0     0.0     0.0    0.         0.     0.0    0.0
  19      3.9   0.0     6.0     0.0     0.0     0.0    0.         0.     0.0    0.0
  20      3.9   0.0     5.5     0.0     0.0     0.0    0.         0.     0.0    0.0


   MEAN   4.0   9.3    10.4     0.0     0.0     0.0    0.         0.     0.0    4.1

 STD DEV   .1    .1     4.1     0.0     0.0     0.0    0.         0.     0.0    1.7

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA NOVA           STUDY AREA OWL DRAW            DATE 11  JULY     1982
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
         VEG.  REPR.                             CLASS  PERCENT  TWIG  STALK
                                                                 LNGTH LNGTH
*******************************************************************************
     1      4.2   0.0     0.0    0.0    0.0    0.0   0.      0.       .9   0.0
     2      4.2   0.0     0.0    0.0    0.0    0.0   0.      0.       .9   0.0
     3      4.2   0.0     0.0    0.0    0.0    0.0   0.      0.       .9   0.0
     4      4.2   9.5     0.0    0.0    0.0    0.0   0.      0.       .9   5.0
     5      4.2   0.0     0.0    0.0    0.0    0.0   0.      0.       .9   0.0
     6      4.3   0.0     0.0    0.0    0.0    0.0   0.      0.      1.0   0.0
     7      4.2   9.5     0.0    0.0    0.0    0.0   0.      0.       .8   4.5
     8      4.2   9.5     0.0    0.0    0.0    0.0   0.      0.       .9   6.5
     9      4.3   9.5     0.0    0.0    0.0    0.0   0.      0.      1.0   7.5
    10      3.9   0.0     0.0    0.0    0.0    0.0   0.      0.       .3   0.0
    11      4.3   0.0     0.0    0.0    0.0    0.0   0.      0.      1.0   0.0
    12      4.3   0.0     0.0    0.0    0.0    0.0   0.      0.      1.0   0.0
    13      4.2   0.0     0.0    0.0    0.0    0.0   0.      0.       .9   0.0
    14      4.0   0.0     0.0    0.0    0.0    0.0   0.      0.       .7   0.0
    15      4.3   9.5     0.0    0.0    0.0    0.0   0.      0.      1.0  10.0
    16      4.1   9.4     0.0    0.0    0.0    0.0   0.      0.       .6   5.5
    17      4.2   9.5     0.0    0.0    0.0    0.0   0.      0.       .9   7.5
    18      4.3   0.0     0.0    0.0    0.0    0.0   0.      0.      1.0   0.0
    19      4.3   9.5     0.0    0.0    0.0    0.0   0.      0.      1.0   6.5
    20      4.2   0.0     0.0    0.0    0.0    0.0   0.      0.       .9   0.0


   MEAN     4.2   9.5     0.0    0.0    0.0    0.0   0.      0.       .9   6.6

STD DEV      .1    .0     0.0    0.0    0.0    0.0   0.      0.       .2   1.7

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA NOVA STUDY AREA OWL DRAW DATE 10 AUGUST 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.2	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
2	4.3	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
3	4.2	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
4	4.3	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
5	4.6	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
6	4.6	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
7	4.3	9.8	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
8	4.4	9.8	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
9	4.4	9.8	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
10	4.6	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
11	4.5	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
12	4.3	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
13	4.4	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
14	4.2	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
15	4.6	9.8	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
16	4.4	9.8	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
17	4.5	9.8	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
18	4.5	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
19	4.5	9.8	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
20	4.5	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
MEAN	4.4	9.8	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
STD DEV	.1	.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMISIA NOVA          STUDY AREA OWL DRAW             DATE 27  AUGUST   1982
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
        VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                 LNGTH LNGTH
*****************************************************************************
   1     4.6   0.0    0.0    0.0    0.0    0.0    0.       0.    1.5   0.0
   2     4.4   0.0    0.0    0.0    0.0    0.0    0.       0.     .8   0.0
   3     4.5   0.0    0.0    0.0    0.0    0.0    0.       0.     .8   0.0
   4     4.4   9.8    0.0    0.0    0.0    0.0    0.       0.     .8  10.0
   5     4.6   0.0    0.0    0.0    0.0    0.0    0.       0.    1.0   0.0
   6     4.6   0.0    0.0    0.0    0.0    0.0    0.       0.    1.0   0.0
   7     4.5   9.8    0.0    0.0    0.0    0.0    0.       0.     .8   5.0
   8     4.5   9.8    0.0    0.0    0.0    0.0    0.       0.     .9  10.0
   9     4.5   9.8    0.0    0.0    0.0    0.0    0.       0.    8.0  10.0
  10     4.5   0.0    0.0    0.0    0.0    0.0    0.       0.    1.0   0.0
  11     4.6   0.0    0.0    0.0    0.0    0.0    0.       0.    1.0   0.0
  12     4.4   0.0    0.0    0.0    0.0    0.0    0.       0.     .5   0.0
  13     4.4   0.0    0.0    0.0    0.0    0.0    0.       0.     .5   0.0
  14     4.6   0.0    0.0    0.0    0.0    0.0    0.       0.    1.0   0.0
  15     4.6   9.8    0.0    0.0    0.0    0.0    0.       0.    1.5  15.0
  16     4.5   9.7    0.0    0.0    0.0    0.0    0.       0.     .5   5.0
  17     4.5   9.8    0.0    0.0    0.0    0.0    0.       0.     .8   8.0
  18     4.6   0.0    0.0    0.0    0.0    0.0    0.       0.    1.0   0.0
  19     4.5   9.8    0.0    0.0    0.0    0.0    0.       0.     .9  10.0
  20     4.5   0.0    0.0    0.0    0.0    0.0    0.       0.     .9   0.0


   MEAN  4.5   9.8    0.0    0.0    0.0    0.0    0.       0.    1.3   9.1

STD DEV   .1    .0    0.0    0.0    0.0    0.0    0.       0.    1.6   3.2

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA NOVA STUDY AREA OWL DRAW DATE 16 SEPT 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	5.1	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
2	5.2	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
3	5.2	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
4	5.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
5	5.2	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
6	5.2	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
7	5.2	13.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
8	5.1	13.3	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
9	5.1	13.3	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
10	5.2	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
11	5.2	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
12	5.1	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
13	5.1	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
14	5.2	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
15	5.1	13.5	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
16	5.3	13.6	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
17	5.2	14.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
18	5.1	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
19	5.1	13.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
20	5.1	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
MEAN	5.1	13.4	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
STD DEV	.1	.4	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA NOVA STUDY AREA SWEETWATER DATE 01 MAY 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE		PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
	VEG.	REPR.								
1	2.0	0.0	11.0	0.0	0.0	0.0	0.	0.	0.0	0.0
2	2.0	0.0	12.0	0.0	0.0	0.0	0.	0.	0.0	0.0
3	2.0	0.0	9.0	0.0	0.0	0.0	0.	0.	0.0	0.0
4	2.0	0.0	12.0	0.0	0.0	0.0	0.	0.	0.0	0.0
5	2.0	0.0	5.0	0.0	0.0	0.0	0.	0.	0.0	0.0
6	2.1	0.0	11.0	0.0	0.0	0.0	0.	0.	0.0	0.0
7	2.0	0.0	10.0	0.0	0.0	0.0	0.	0.	0.0	0.0
8	2.0	0.0	9.5	0.0	0.0	0.0	0.	0.	0.0	0.0
9	2.0	0.0	15.0	0.0	0.0	0.0	0.	0.	0.0	0.0
10	2.0	0.0	8.0	0.0	0.0	0.0	0.	0.	0.0	0.0
11	2.0	0.0	13.0	0.0	0.0	0.0	0.	0.	0.0	0.0
12	2.0	0.0	14.0	0.0	0.0	0.0	0.	0.	0.0	0.0
13	2.0	0.0	16.0	0.0	0.0	0.0	0.	0.	0.0	0.0
14	2.0	0.0	7.0	0.0	0.0	0.0	0.	0.	0.0	0.0
15	2.0	0.0	8.0	0.0	0.0	0.0	0.	0.	0.0	0.0
16	2.2	0.0	5.0	0.0	0.0	0.0	0.	0.	0.0	0.0
17	2.0	0.0	15.0	0.0	0.0	0.0	0.	0.	0.0	0.0
18	2.0	0.0	10.0	0.0	0.0	0.0	0.	0.	0.0	0.0
19	2.0	0.0	9.0	0.0	0.0	0.0	0.	0.	0.0	0.0
20	2.0	0.0	19.0	0.0	0.0	0.0	0.	0.	0.0	0.0
MEAN	2.0	0.0	10.9	0.0	0.0	0.0	0.	0.	0.0	0.0
STD DEV	.0	0.0	3.7	0.0	0.0	0.0	0.	0.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMISIA NOVA          STUDY AREA SWEETWATER          DATE 19  MAY        1982
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
        VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                 LNGTH LNGTH
*******************************************************************************
    1    3.2   0.0   11.0   50.0   27.0    0.0   0.       0.     0.0   0.0
    2    3.1   0.0   15.0   69.0   29.0    0.0   0.       0.     0.0   0.0
    3    3.2   0.0   14.0   38.0   28.0    0.0   0.       0.     0.0   0.0
    4    3.2   0.0   22.0   75.0   65.0    0.0   0.       0.     0.0   0.0
    5    3.3   0.0   15.0   33.0   20.0    0.0   0.       0.     0.0   0.0
    6    3.2   0.0   13.0   49.0   22.0    0.0   0.       0.     0.0   0.0
    7    3.2   0.0    9.0   20.0    9.0    0.0   0.       0.     0.0   0.0
    8    3.3   0.0   10.5   20.0   14.0    0.0   0.       0.     0.0   0.0
    9    3.3   0.0   22.0   66.0   41.0    0.0   0.       0.     0.0   0.0
   10    3.1   0.0    9.0   28.0   17.0    0.0   0.       0.     0.0   0.0
   11    3.3   0.0   17.0   37.0   30.0    0.0   0.       0.     0.0   0.0
   12    3.2   0.0   13.0   28.0   16.0    0.0   0.       0.     0.0   0.0
   13    3.1   0.0   18.0   73.0   52.0    0.0   0.       0.     0.0   0.0
   14    3.2   0.0   10.0   18.0   14.0    0.0   0.       0.     0.0   0.0
   15    3.3   0.0    8.0   20.0   10.0    0.0   0.       0.     0.0   0.0
   16    3.2   0.0    4.0   10.0    9.0    0.0   0.       0.     0.0   0.0
   17    3.2   0.0   17.0   47.0   36.0    0.0   0.       0.     0.0   0.0
   18    3.3   0.0   10.0   32.0   19.0    0.0   0.       0.     0.0   0.0
   19    3.2   0.0    8.5   32.0   14.0    0.0   0.       0.     0.0   0.0
   20    3.3   0.0   14.0   39.0   24.0    0.0   0.       0.     0.0   0.0


   MEAN  3.2   0.0   13.0   39.2   24.8    0.0   0.       0.     0.0   0.0

STD DEV   .1   0.0    4.7   19.3   14.6    0.0   0.       0.     0.0   0.0

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA NOVA            STUDY AREA SWEETWATER          DATE 04  JUNE      1982
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  PLANT PHENOLOGICAL    PLANT   PLANT   PLANT   PLANT   PLANT    DEAD     NEW    NEW
  NO.   STAGE SCORE     HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH    VEG.   SEED
         VEG.  REPR.                                    CLASS   PERCENT   TWIG   STALK
                                                                          LNGTH  LNGTH
*******************************************************************************
    1     3.3   0.0     18.0     0.0     0.0     0.0    0.        0.      0.0    0.0
    2     3.4   9.2     15.0     0.0     0.0     0.0    0.        0.       .3     .4
    3     3.3   9.2     15.5     0.0     0.0     0.0    0.        0.       .2     .5
    4     3.3   9.2     18.5     0.0     0.0     0.0    0.        0.       .3     .5
    5     3.3   0.0      7.0     0.0     0.0     0.0    0.        0.       .3    0.0
    6     3.3   9.2     11.0     0.0     0.0     0.0    0.        0.       .2    1.2
    7     3.3   0.0      6.5     0.0     0.0     0.0    0.        0.       .3    0.0
    8     3.3   0.0      6.5     0.0     0.0     0.0    0.        0.       .3    0.0
    9     3.3   9.2     19.5     0.0     0.0     0.0    0.        0.       .5    1.0
   10     3.3   9.2     10.0     0.0     0.0     0.0    0.        0.       .4     .5
   11     3.3   9.2     16.0     0.0     0.0     0.0    0.        0.       .4     .5
   12     3.3   0.0     11.0     0.0     0.0     0.0    0.        0.       .3    0.0
   13     3.3   0.0     16.0     0.0     0.0     0.0    0.        0.       .4    0.0
   14     3.3   9.2      8.0     0.0     0.0     0.0    0.        0.       .4     .5
   15     3.3   9.2     10.5     0.0     0.0     0.0    0.        0.       .3     .4
   16     3.3   0.0      6.0     0.0     0.0     0.0    0.        0.      0.0    0.0
   17     3.2   9.2     16.0     0.0     0.0     0.0    0.        0.       .5     .5
   18     3.2   0.0     11.0     0.0     0.0     0.0    0.        0.      0.0    0.0
   19     3.2   0.0      9.0     0.0     0.0     0.0    0.        0.       .4    0.0
   20     3.2   0.0     11.5     0.0     0.0     0.0    0.        0.       .4    0.0


   MEAN   3.3   9.2     12.1     0.0     0.0     0.0    0.        0.       .3     .6

 STD DEV   .0    .0      4.3     0.0     0.0     0.0    0.        0.       .1     .3

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA NOVA            STUDY AREA SWEETWATER          DATE 16  JUNE      1982
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 PLANT  PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.    STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
          VEG.  REPR.                             CLASS  PERCENT  TWIG  STALK
                                                                  LNGTH LNGTH
*****************************************************************************
    1     3.4   9.3     9.5   0.0    0.0    0.0   0.        0.    0.0   2.0
    2     3.4   9.3    15.0   0.0    0.0    0.0   0.        0.    0.0   2.5
    3     3.4   9.3    14.5   0.0    0.0    0.0   0.        0.    0.0   4.0
    4     3.4   9.3    16.0   0.0    0.0    0.0   0.        0.    0.0   2.0
    5     3.6   0.0     6.0   0.0    0.0    0.0   0.        0.    0.0   0.0
    6     3.4   9.3    10.0   0.0    0.0    0.0   0.        0.    0.0   2.5
    7     3.4   9.1     9.5   0.0    0.0    0.0   0.        0.    0.0   1.5
    8     3.6   0.0    10.3   0.0    0.0    0.0   0.        0.    0.0   0.0
    9     3.4   9.3    17.0   0.0    0.0    0.0   0.        0.    0.0   5.0
   10     3.4   9.3     6.0   0.0    0.0    0.0   0.        0.    0.0   4.0
   11     3.4   9.3    17.5   0.0    0.0    0.0   0.        0.    0.0   4.0
   12     3.6   9.1    12.0   0.0    0.0    0.0   0.        0.    0.0   2.0
   13     3.4   0.0    16.0   0.0    0.0    0.0   0.        0.    0.0   0.0
   14     3.6   0.0     7.0   0.0    0.0    0.0   0.        0.    0.0   0.0
   15     3.4   9.3     7.5   0.0    0.0    0.0   0.        0.    0.0   2.5
   16     3.6   0.0     4.0   0.0    0.0    0.0   0.        0.    0.0   0.0
   17     3.4   9.3    12.0   0.0    0.0    0.0   0.        0.    0.0   2.0
   18     3.4   9.3     9.5   0.0    0.0    0.0   0.        0.    0.0   2.5
   19     3.4   0.0    10.0   0.0    0.0    0.0   0.        0.    0.0   0.0
   20     3.4   0.0    11.5   0.0    0.0    0.0   0.        0.    0.0   0.0


    MEAN  3.5   9.3    11.0   0.0    0.0    0.0   0.        0.    0.0   2.8

 STD DEV   .1    .1     3.9   0.0    0.0    0.0   0.        0.    0.0   1.1

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA NOVA   STUDY AREA SWEETWATER   DATE 28 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE		PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
	VEG.	REPR.								
1	3.4	9.3	0.0	0.0	0.0	0.0	0.	0.	.5	3.5
2	3.5	9.3	0.0	0.0	0.0	0.0	0.	0.	.7	3.0
3	3.5	9.4	0.0	0.0	0.0	0.0	0.	0.	.6	4.0
4	3.5	9.3	0.0	0.0	0.0	0.0	0.	0.	.7	2.5
5	3.4	0.0	0.0	0.0	0.0	0.0	0.	0.	.4	0.0
6	3.5	9.5	0.0	0.0	0.0	0.0	0.	0.	.6	4.0
7	3.6	9.3	0.0	0.0	0.0	0.0	0.	0.	.9	3.0
8	3.5	0.0	0.0	0.0	0.0	0.0	0.	0.	.8	0.0
9	3.6	9.4	0.0	0.0	0.0	0.0	0.	0.	.9	3.0
10	3.5	9.4	0.0	0.0	0.0	0.0	0.	0.	.7	5.0
11	3.5	9.4	0.0	0.0	0.0	0.0	0.	0.	.9	3.0
12	3.5	9.4	0.0	0.0	0.0	0.0	0.	0.	.9	2.5
13	3.6	9.4	0.0	0.0	0.0	0.0	0.	0.	.9	3.5
14	3.5	9.4	0.0	0.0	0.0	0.0	0.	0.	.6	3.0
15	3.5	9.4	0.0	0.0	0.0	0.0	0.	0.	.7	2.5
16	3.4	0.0	0.0	0.0	0.0	0.0	0.	0.	.2	0.0
17	3.5	9.4	0.0	0.0	0.0	0.0	0.	0.	.8	3.0
18	3.9	9.4	0.0	0.0	0.0	0.0	0.	0.	1.0	2.5
19	3.8	9.4	0.0	0.0	0.0	0.0	0.	0.	.9	3.0
20	3.5	9.4	0.0	0.0	0.0	0.0	0.	0.	.9	3.5
MEAN	3.5	9.4	0.0	0.0	0.0	0.0	0.	0.	.7	3.2
STD DEV	.1	.1	0.0	0.0	0.0	0.0	0.	0.	.2	.7

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA NOVA STUDY AREA SWEETWATER DATE 10 JULY 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.6	9.5	0.0	0.0	0.0	0.0	0.	0.	.6	6.0
2	3.6	9.5	0.0	0.0	0.0	0.0	0.	0.	.7	5.0
3	3.5	9.5	0.0	0.0	0.0	0.0	0.	0.	.7	5.0
4	3.5	9.5	0.0	0.0	0.0	0.0	0.	0.	.7	7.0
5	3.5	0.0	0.0	0.0	0.0	0.0	0.	0.	.4	0.0
6	3.5	9.5	0.0	0.0	0.0	0.0	0.	0.	.6	5.0
7	3.6	9.5	0.0	0.0	0.0	0.0	0.	0.	.8	6.0
8	3.5	0.0	0.0	0.0	0.0	0.0	0.	0.	.9	0.0
9	3.6	9.5	0.0	0.0	0.0	0.0	0.	0.	.9	10.0
10	3.5	9.5	0.0	0.0	0.0	0.0	0.	0.	.8	6.0
11	3.5	9.5	0.0	0.0	0.0	0.0	0.	0.	.9	8.0
12	3.6	9.5	0.0	0.0	0.0	0.0	0.	0.	.9	5.0
13	3.7	9.5	0.0	0.0	0.0	0.0	0.	0.	.7	5.0
14	3.6	9.5	0.0	0.0	0.0	0.0	0.	0.	.7	8.0
15	3.6	9.5	0.0	0.0	0.0	0.0	0.	0.	.3	6.0
16	3.5	0.0	0.0	0.0	0.0	0.0	0.	0.	.8	0.0
17	3.6	9.5	0.0	0.0	0.0	0.0	0.	0.	.9	8.0
18	3.6	9.5	0.0	0.0	0.0	0.0	0.	0.	.8	3.0
19	3.6	9.6	0.0	0.0	0.0	0.0	0.	0.	.9	12.0
20	3.6	0.0	0.0	0.0	0.0	0.0	0.	0.	.8	0.0
MEAN	3.6	9.5	0.0	0.0	0.0	0.0	0.	0.	.7	6.6
STD DEV	.1	.0	0.0	0.0	0.0	0.0	0.	0.	.2	2.2

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA NOVA STUDY AREA SWEETWATER DATE 25 JULY 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.0	9.5	20.0	0.0	0.0	0.0	0.	0.	.2	8.0
2	4.0	9.5	21.0	0.0	0.0	0.0	0.	0.	.2	8.0
3	4.0	9.6	22.0	0.0	0.0	0.0	0.	0.	.2	7.0
4	4.1	9.5	17.0	0.0	0.0	0.0	0.	0.	.4	6.0
5	4.0	0.0	7.0	0.0	0.0	0.0	0.	0.	.2	0.0
6	4.1	9.6	16.0	0.0	0.0	0.0	0.	0.	.4	9.0
7	4.0	9.5	11.0	0.0	0.0	0.0	0.	0.	.3	6.0
8	4.2	0.0	9.0	0.0	0.0	0.0	0.	0.	.4	0.0
9	4.1	9.6	25.0	0.0	0.0	0.0	0.	0.	.4	6.0
10	4.1	9.6	12.0	0.0	0.0	0.0	0.	0.	.3	6.0
11	4.1	9.6	23.0	0.0	0.0	0.0	0.	0.	.4	7.5
12	4.0	9.5	17.0	0.0	0.0	0.0	0.	0.	.2	6.0
13	4.1	9.5	18.0	0.0	0.0	0.0	0.	0.	.3	5.0
14	4.1	9.5	12.0	0.0	0.0	0.0	0.	0.	.3	5.0
15	4.1	9.5	11.0	0.0	0.0	0.0	0.	0.	.3	5.0
16	4.0	0.0	7.0	0.0	0.0	0.0	0.	0.	.2	0.0
17	4.1	9.5	19.0	0.0	0.0	0.0	0.	0.	.4	8.0
18	4.1	9.5	15.0	0.0	0.0	0.0	0.	0.	.3	4.0
19	4.2	9.5	16.0	0.0	0.0	0.0	0.	0.	.3	6.0
20	4.1	9.5	19.0	0.0	0.0	0.0	0.	0.	.4	4.0
MEAN	4.1	9.5	15.9	0.0	0.0	0.0	0.	0.	.3	6.3
STD DEV	.1	.0	5.3	0.0	0.0	0.0	0.	0.	.1	1.5

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA NOVA STUDY AREA SWEETWATER DATE 08 AUGUST 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.5	9.7	0.0	0.0	0.0	0.0	0.	0.	.3	6.0
2	4.5	9.7	0.0	0.0	0.0	0.0	0.	0.	.3	6.0
3	4.5	9.7	0.0	0.0	0.0	0.0	0.	0.	.3	6.0
4	4.7	9.7	0.0	0.0	0.0	0.0	0.	0.	.2	6.0
5	4.7	0.0	0.0	0.0	0.0	0.0	0.	0.	.2	0.0
6	4.5	9.7	0.0	0.0	0.0	0.0	0.	0.	.3	6.0
7	4.7	9.6	0.0	0.0	0.0	0.0	0.	0.	.2	5.0
8	4.7	0.0	0.0	0.0	0.0	0.0	0.	0.	.2	0.0
9	4.5	9.6	0.0	0.0	0.0	0.0	0.	0.	.3	8.0
10	4.5	9.6	0.0	0.0	0.0	0.0	0.	0.	.2	5.0
11	4.5	9.7	0.0	0.0	0.0	0.0	0.	0.	.3	6.0
12	4.5	9.7	0.0	0.0	0.0	0.0	0.	0.	.2	5.0
13	4.5	9.7	0.0	0.0	0.0	0.0	0.	0.	.2	4.0
14	4.7	9.6	0.0	0.0	0.0	0.0	0.	0.	.2	5.0
15	4.7	9.6	0.0	0.0	0.0	0.0	0.	0.	.2	5.0
16	4.6	0.0	0.0	0.0	0.0	0.0	0.	0.	.2	0.0
17	4.5	9.6	0.0	0.0	0.0	0.0	0.	0.	.3	7.0
18	4.5	9.7	0.0	0.0	0.0	0.0	0.	0.	.2	3.0
19	4.5	9.6	0.0	0.0	0.0	0.0	0.	0.	.2	5.0
20	4.5	9.7	0.0	0.0	0.0	0.0	0.	0.	.2	4.0
MEAN	4.6	9.7	0.0	0.0	0.0	0.0	0.	0.	.2	5.4
STD DEV	.1	.1	0.0	0.0	0.0	0.0	0.	0.	.0	1.2

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA NOVA STUDY AREA SWEETWATER DATE 27 AUGUST 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.6	9.8	0.0	0.0	0.0	0.0	0.	0.	.5	6.0
2	4.6	9.8	0.0	0.0	0.0	0.0	0.	0.	.5	6.0
3	4.6	10.1	0.0	0.0	0.0	0.0	0.	0.	.5	8.0
4	4.6	9.5	0.0	0.0	0.0	0.0	0.	0.	1.0	7.0
5	4.6	9.8	0.0	0.0	0.0	0.0	0.	0.	1.0	5.5
6	4.6	10.0	0.0	0.0	0.0	0.0	0.	0.	.8	8.0
7	4.4	9.9	0.0	0.0	0.0	0.0	0.	0.	.4	6.0
8	4.4	0.0	0.0	0.0	0.0	0.0	0.	0.	.4	0.0
9	4.6	9.9	0.0	0.0	0.0	0.0	0.	0.	.7	7.0
10	4.6	9.8	0.0	0.0	0.0	0.0	0.	0.	.5	7.5
11	4.6	10.0	0.0	0.0	0.0	0.0	0.	0.	1.0	8.0
12	4.6	9.5	0.0	0.0	0.0	0.0	0.	0.	1.0	5.0
13	4.6	9.8	0.0	0.0	0.0	0.0	0.	0.	1.0	8.0
14	4.6	9.8	0.0	0.0	0.0	0.0	0.	0.	.9	7.5
15	4.6	9.9	0.0	0.0	0.0	0.0	0.	0.	.8	5.5
16	4.5	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
17	4.6	9.8	0.0	0.0	0.0	0.0	0.	0.	1.0	8.0
18	4.4	9.8	0.0	0.0	0.0	0.0	0.	0.	.4	5.0
19	4.6	9.8	0.0	0.0	0.0	0.0	0.	0.	.9	7.0
20	4.6	9.8	0.0	0.0	0.0	0.0	0.	0.	.9	6.5
MEAN	4.6	9.8	0.0	0.0	0.0	0.0	0.	0.	.7	6.8
STD DEV	.1	.1	0.0	0.0	0.0	0.0	0.	0.	.2	1.1

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMISIA NOVA              STUDY AREA SWEETWATER          DATE 10  SEPT      1982
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  PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
  NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
         VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                  LNGTH LNGTH
*****************************************************************************
     1    4.6  10.0    0.0    0.0    0.0    0.0   0.       0.      .4   4.0
     2    4.6  10.0    0.0    0.0    0.0    0.0   0.       0.      .5   7.0
     3    5.0  10.1    0.0    0.0    0.0    0.0   0.       0.      .3   7.0
     4    4.6   9.9    0.0    0.0    0.0    0.0   0.       0.      .3   6.0
     5    4.6  10.0    0.0    0.0    0.0    0.0   0.       0.      .6    .8
     6    4.6   9.9    0.0    0.0    0.0    0.0   0.       0.      .5   7.0
     7    5.0   9.9    0.0    0.0    0.0    0.0   0.       0.      .3   6.0
     8    5.0   0.0    0.0    0.0    0.0    0.0   0.       0.      .3   0.0
     9    4.6  10.0    0.0    0.0    0.0    0.0   0.       0.      .4   7.0
    10    4.5   9.9    0.0    0.0    0.0    0.0   0.       0.      .2   6.0
    11    4.6  10.0    0.0    0.0    0.0    0.0   0.       0.      .4   7.0
    12    4.7   9.9    0.0    0.0    0.0    0.0   0.       0.      .3   6.5
    13    4.7   9.9    0.0    0.0    0.0    0.0   0.       0.      .4   6.0
    14    4.7   9.9    0.0    0.0    0.0    0.0   0.       0.      .4   7.0
    15    4.6   9.8    0.0    0.0    0.0    0.0   0.       0.      .4   6.0
    16    5.0   0.0    0.0    0.0    0.0    0.0   0.       0.      .1   0.0
    17    4.6   0.0    0.0    0.0    0.0    0.0   0.       0.      .4   0.0
    18    4.6   9.9    0.0    0.0    0.0    0.0   0.       0.      .4   5.0
    19    4.6  10.0    0.0    0.0    0.0    0.0   0.       0.      .3   5.5
    20    4.6   9.9    0.0    0.0    0.0    0.0   0.       0.      .4   5.0


    MEAN  4.7   9.9    0.0    0.0    0.0    0.0   0.       0.      .4   5.8

 STD DEV   .2    .1    0.0    0.0    0.0    0.0   0.       0.      .1   1.6

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA BUD KIMBAL   DATE 30 APRIL   1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.2	0.0	23.0	0.0	0.0	0.0	0.	0.	0.0	0.0
2	3.3	0.0	10.0	0.0	0.0	0.0	0.	0.	0.0	0.0
3	3.2	0.0	11.0	0.0	0.0	0.0	0.	0.	0.0	0.0
4	3.2	0.0	20.0	0.0	0.0	0.0	0.	0.	0.0	0.0
5	3.3	0.0	35.0	0.0	0.0	0.0	0.	0.	0.0	0.0
6	3.3	0.0	21.5	0.0	0.0	0.0	0.	0.	0.0	0.0
7	3.3	0.0	14.5	0.0	0.0	0.0	0.	0.	0.0	0.0
8	3.2	0.0	31.0	0.0	0.0	0.0	0.	0.	0.0	0.0
9	3.3	0.0	11.0	0.0	0.0	0.0	0.	0.	0.0	0.0
10	3.3	0.0	11.0	0.0	0.0	0.0	0.	0.	0.0	0.0
11	3.3	0.0	24.0	0.0	0.0	0.0	0.	0.	0.0	0.0
12	3.0	0.0	11.5	0.0	0.0	0.0	0.	0.	0.0	0.0
13	3.3	0.0	13.0	0.0	0.0	0.0	0.	0.	0.0	0.0
14	3.3	0.0	27.5	0.0	0.0	0.0	0.	0.	0.0	0.0
15	3.2	0.0	25.0	0.0	0.0	0.0	0.	0.	0.0	0.0
16	3.1	0.0	19.0	0.0	0.0	0.0	0.	0.	0.0	0.0
17	3.2	0.0	47.0	0.0	0.0	0.0	0.	0.	0.0	0.0
18	3.2	0.0	47.0	0.0	0.0	0.0	0.	0.	0.0	0.0
19	3.2	0.0	26.0	0.0	0.0	0.0	0.	0.	0.0	0.0
20	3.2	0.0	29.0	0.0	0.0	0.0	0.	0.	0.0	0.0
MEAN	3.2	0.0	22.9	0.0	0.0	0.0	0.	0.	0.0	0.0
STD DEV	.1	0.0	11.2	0.0	0.0	0.0	0.	0.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA   STUDY AREA BUD KIMBAL   DATE 18 MAY 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.4	0.0	20.5	37.0	27.0	0.0	0.	0.	0.0	0.0
2	3.3	0.0	8.5	21.5	15.0	0.0	0.	0.	0.0	0.0
3	3.3	0.0	12.5	17.0	8.5	0.0	0.	0.	0.0	0.0
4	3.3	0.0	18.5	36.0	25.0	0.0	0.	0.	0.0	0.0
5	3.4	0.0	30.0	79.5	30.0	0.0	0.	0.	0.0	0.0
6	3.3	0.0	21.0	35.0	31.0	0.0	0.	0.	0.0	0.0
7	3.2	0.0	15.0	16.0	13.0	0.0	0.	0.	0.0	0.0
8	3.2	0.0	26.0	49.0	28.0	0.0	0.	0.	0.0	0.0
9	3.3	0.0	12.0	25.5	14.0	0.0	0.	0.	0.0	0.0
10	3.2	0.0	13.0	22.0	13.5	0.0	0.	0.	0.0	0.0
11	3.3	0.0	20.0	46.0	31.0	0.0	0.	0.	0.0	0.0
12	3.3	0.0	10.0	13.5	9.0	0.0	0.	0.	0.0	0.0
13	3.3	0.0	13.5	29.0	20.5	0.0	0.	0.	0.0	0.0
14	3.3	0.0	25.0	33.0	13.0	0.0	0.	0.	0.0	0.0
15	3.3	0.0	24.0	40.0	16.0	0.0	0.	0.	0.0	0.0
16	3.3	0.0	15.0	23.0	12.5	0.0	0.	0.	0.0	0.0
17	3.4	0.0	42.5	54.0	38.0	0.0	0.	0.	0.0	0.0
18	3.3	0.0	35.0	42.0	20.0	0.0	0.	0.	0.0	0.0
19	3.3	0.0	37.0	92.0	30.0	0.0	0.	0.	0.0	0.0
20	3.3	0.0	24.0	25.0	16.0	0.0	0.	0.	0.0	0.0
MEAN	3.3	0.0	21.2	36.8	20.6	0.0	0.	0.	0.0	0.0
STD DEV	.1	0.0	9.4	20.3	8.7	0.0	0.	0.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA STUDY AREA BUD KIMBAL DATE 02 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.5	9.1	16.0	0.0	0.0	0.0	0.	0.	0.0	3.5
2	3.5	9.1	9.0	0.0	0.0	0.0	0.	0.	0.0	3.0
3	3.4	0.0	8.0	0.0	0.0	0.0	0.	0.	0.0	0.0
4	3.6	9.1	19.0	0.0	0.0	0.0	0.	0.	0.0	4.0
5	3.5	9.0	29.0	0.0	0.0	0.0	0.	0.	0.0	0.0
6	3.5	9.0	21.0	0.0	0.0	0.0	0.	0.	0.0	1.0
7	3.5	9.1	14.5	0.0	0.0	0.0	0.	0.	0.0	2.5
8	3.5	9.0	29.0	0.0	0.0	0.0	0.	0.	0.0	1.0
9	3.5	9.0	12.0	0.0	0.0	0.0	0.	0.	0.0	0.0
10	3.5	9.1	12.5	0.0	0.0	0.0	0.	0.	0.0	2.5
11	3.4	0.0	23.5	0.0	0.0	0.0	0.	0.	0.0	0.0
12	3.4	9.0	9.0	0.0	0.0	0.0	0.	0.	0.0	0.0
13	3.5	9.0	24.0	0.0	0.0	0.0	0.	0.	0.0	0.0
14	3.5	9.1	26.5	0.0	0.0	0.0	0.	0.	0.0	4.0
15	3.5	9.1	22.0	0.0	0.0	0.0	0.	0.	0.0	3.0
16	3.4	9.1	17.0	0.0	0.0	0.0	0.	0.	0.0	4.5
17	3.5	9.1	49.0	0.0	0.0	0.0	0.	0.	0.0	5.5
18	3.5	9.1	43.0	0.0	0.0	0.0	0.	0.	0.0	3.0
19	3.6	9.1	22.0	0.0	0.0	0.0	0.	0.	0.0	4.0
20	3.4	0.0	25.0	0.0	0.0	0.0	0.	0.	0.0	0.0
MEAN	3.5	9.1	21.6	0.0	0.0	0.0	0.	0.	0.0	3.2
STD DEV	.1	.0	10.6	0.0	0.0	0.0	0.	0.	0.0	1.3

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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  ARTEMISIA TRIDENTATA   STUDY AREA BUD KIMBAL          DATE 29  JUNE      1982
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   PLANT PHENOLOGICAL   PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
   NO.   STAGE SCORE    HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
          VEG.  REPR.                               CLASS  PERCENT  TWIG  STALK
                                                                    LNGTH LNGTH
****************************************************************************
     1     4.0   9.4    24.0    0.0    0.0    0.0   0.        0.     0.0   7.0
     2     4.1   0.0     9.0    0.0    0.0    0.0   0.        0.     0.0   0.0
     3     3.9   0.0     7.0    0.0    0.0    0.0   0.        0.     0.0   0.0
     4     4.1   9.4    21.0    0.0    0.0    0.0   0.        0.     0.0   5.0
     5     4.0   9.4    37.5    0.0    0.0    0.0   0.        0.     0.0   3.0
     6     4.0   9.4    19.5    0.0    0.0    0.0   0.        0.     0.0   5.5
     7     4.1   9.4    21.0    0.0    0.0    0.0   0.        0.     0.0   7.0
     8     4.1   9.4    35.0    0.0    0.0    0.0   0.        0.     0.0   8.0
     9     4.0   9.3    13.0    0.0    0.0    0.0   0.        0.     0.0   4.5
    10     4.1   9.4    12.0    0.0    0.0    0.0   0.        0.     0.0   5.5
    11     4.0   0.0    23.0    0.0    0.0    0.0   0.        0.     0.0   0.0
    12     3.9   0.0     4.0    0.0    0.0    0.0   0.        0.     0.0   0.0
    13     3.9   9.3    14.5    0.0    0.0    0.0   0.        0.     0.0   3.0
    14     4.2   9.5    33.5    0.0    0.0    0.0   0.        0.     0.0  13.0
    15     4.1   9.4    28.5    0.0    0.0    0.0   0.        0.     0.0   6.0
    16     4.1   9.4    20.5    0.0    0.0    0.0   0.        0.     0.0  11.0
    17     4.2   9.5    53.0    0.0    0.0    0.0   0.        0.     0.0  12.0
    18     4.1   9.4    41.0    0.0    0.0    0.0   0.        0.     0.0   5.0
    19     4.1   9.4    23.0    0.0    0.0    0.0   0.        0.     0.0   6.0
    20     4.2   9.4    13.0    0.0    0.0    0.0   0.        0.     0.0   6.5


     MEAN  4.1   9.4    22.7    0.0    0.0    0.0   0.        0.     0.0   6.8

  STD DEV   .1    .1    12.5    0.0    0.0    0.0   0.        0.     0.0   2.9

   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
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 ARTEMISIA TRIDENTATA   STUDY AREA BUD KIMBAL         DATE 10  JULY     1982
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  PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
  NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
         VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                  LNGTH LNGTH
*************************************************************************************
     1    4.2   9.5    0.0    0.0    0.0    0.0   0.       0.      .8   6.5
     2    4.2   0.0    0.0    0.0    0.0    0.0   0.       0.      .8   0.0
     3    4.2   0.0    0.0    0.0    0.0    0.0   0.       0.      .8   0.0
     4    4.3   9.5    0.0    0.0    0.0    0.0   0.       0.     1.0   6.5
     5    4.2   9.4    0.0    0.0    0.0    0.0   0.       0.      .6   3.5
     6    4.2   9.5    0.0    0.0    0.0    0.0   0.       0.      .8   9.0
     7    4.3   9.5    0.0    0.0    0.0    0.0   0.       0.     1.0   5.0
     8    4.3   9.5    0.0    0.0    0.0    0.0   0.       0.     1.0   7.5
     9    4.3   9.5    0.0    0.0    0.0    0.0   0.       0.     1.0   5.0
    10    4.2   9.5    0.0    0.0    0.0    0.0   0.       0.      .7   5.0
    11    4.1   0.0    0.0    0.0    0.0    0.0   0.       0.      .5   0.0
    12    3.9   0.0    0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
    13    4.2   9.4    0.0    0.0    0.0    0.0   0.       0.      .8   4.0
    14    4.2   9.5    0.0    0.0    0.0    0.0   0.       0.      .9  10.0
    15    4.3   9.5    0.0    0.0    0.0    0.0   0.       0.     1.3   9.0
    16    4.3   9.5    0.0    0.0    0.0    0.0   0.       0.     1.0   8.0
    17    4.3   9.5    0.0    0.0    0.0    0.0   0.       0.     1.5  10.0
    18    4.3   9.5    0.0    0.0    0.0    0.0   0.       0.     1.3   8.0
    19    4.3   9.5    0.0    0.0    0.0    0.0   0.       0.     1.3   7.0
    20    4.0   0.0    0.0    0.0    0.0    0.0   0.       0.      .4   0.0


     MEAN 4.2   9.5    0.0    0.0    0.0    0.0   0.       0.      .9   6.9

  STD DEV  .1    .0    0.0    0.0    0.0    0.0   0.       0.      .3   2.1

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
 ARTEMISIA TRIDENTATA   STUDY AREA BUD KIMBAL          DATE 26  JULY      1982
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  PLANT PHENOLOGICAL   PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
  NO.   STAGE SCORE    HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
         VEG.  REPR.                               CLASS  PERCENT  TWIG  STALK
                                                                   LNGTH LNGTH
*********************************************************************************
     1    4.6   9.5    22.0    0.0    0.0    0.0   0.       0.     3.0   8.0
     2    4.5   0.0     8.0    0.0    0.0    0.0   0.       0.     2.0   0.0
     3    4.5   0.0     6.5    0.0    0.0    0.0   0.       0.     2.0   0.0
     4    4.6   9.5    23.0    0.0    0.0    0.0   0.       0.     2.5  10.0
     5    4.6   9.5    35.0    0.0    0.0    0.0   0.       0.     2.0   7.0
     6    4.6   9.6    19.5    0.0    0.0    0.0   0.       0.     3.5   7.5
     7    4.5   0.0    15.0    0.0    0.0    0.0   0.       0.     1.5   0.0
     8    4.6   9.5    34.0    0.0    0.0    0.0   0.       0.     2.0   8.0
     9    4.6   9.5    11.0    0.0    0.0    0.0   0.       0.     3.5   7.0
    10    4.6   9.5    13.5    0.0    0.0    0.0   0.       0.     2.5   6.0
    11    4.5   0.0    21.0    0.0    0.0    0.0   0.       0.     1.5   0.0
    12    4.5   0.0     9.0    0.0    0.0    0.0   0.       0.     1.0   0.0
    13    4.5   9.5    15.0    0.0    0.0    0.0   0.       0.     1.0   6.0
    14    4.6   9.6    35.0    0.0    0.0    0.0   0.       0.     2.0  16.0
    15    4.6   9.5    29.0    0.0    0.0    0.0   0.       0.     2.5   8.5
    16    4.6   9.5    21.0    0.0    0.0    0.0   0.       0.     3.0  12.0
    17    4.6   9.6    55.0    0.0    0.0    0.0   0.       0.     3.0  14.0
    18    4.6   9.6    42.0    0.0    0.0    0.0   0.       0.     2.5  13.0
    19    4.6   9.6    22.0    0.0    0.0    0.0   0.       0.     2.0   9.0
    20    4.6   0.0    13.0    0.0    0.0    0.0   0.       0.     2.0   0.0


   MEAN   4.6   9.5    22.5    0.0    0.0    0.0   0.       0.     2.3   9.4

 STD DEV   .0    .0    12.6    0.0    0.0    0.0   0.       0.      .7   3.1

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA BUD KIMBAL          DATE 09  AUGUST   1982
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  PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
  NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
         VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                  LNGTH LNGTH
*****************************************************************************
    1    4.6   9.8    0.0    0.0    0.0    0.0    0.        0.    1.0   7.0
    2    4.6   0.0    0.0    0.0    0.0    0.0    0.        0.     .9   0.0
    3    4.6   0.0    0.0    0.0    0.0    0.0    0.        0.     .5   0.0
    4    4.6   9.8    0.0    0.0    0.0    0.0    0.        0.    1.5   7.0
    5    4.6   9.6    0.0    0.0    0.0    0.0    0.        0.    1.0   6.0
    6    4.6   9.8    0.0    0.0    0.0    0.0    0.        0.     .9   7.0
    7    4.6   9.5    0.0    0.0    0.0    0.0    0.        0.    1.5   5.0
    8    4.4   9.8    0.0    0.0    0.0    0.0    0.        0.     .3   8.5
    9    4.6   9.8    0.0    0.0    0.0    0.0    0.        0.     .8   6.0
   10    4.4   9.7    0.0    0.0    0.0    0.0    0.        0.     .3   4.0
   11    4.4   0.0    0.0    0.0    0.0    0.0    0.        0.     .4   0.0
   12    4.6   0.0    0.0    0.0    0.0    0.0    0.        0.     .5   0.0
   13    4.6   9.6    0.0    0.0    0.0    0.0    0.        0.    1.0   4.0
   14    4.6   9.8    0.0    0.0    0.0    0.0    0.        0.    1.5   8.0
   15    4.6   9.8    0.0    0.0    0.0    0.0    0.        0.    1.0   7.0
   16    4.6   9.8    0.0    0.0    0.0    0.0    0.        0.    1.0   8.0
   17    4.6   9.8    0.0    0.0    0.0    0.0    0.        0.    2.0  10.0
   18    4.6   9.8    0.0    0.0    0.0    0.0    0.        0.     .8   7.0
   19    4.6   9.7    0.0    0.0    0.0    0.0    0.        0.    1.0   7.0
   20    4.6   0.0    0.0    0.0    0.0    0.0    0.        0.    0.0   0.0


   MEAN  4.6   9.7    0.0    0.0    0.0    0.0    0.        0.     .9   6.8

 STD DEV  .1    .1    0.0    0.0    0.0    0.0    0.        0.     .4   1.6

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA BUD KIMBAL         DATE 28  AUGUST   1982
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW  NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG. SEED
        VEG.  REPR.                              CLASS  PERCENT  TWIG STALK
                                                                 LNGTH LNGTH
*************************************************************************
    1     4.6   9.8    0.0    0.0    0.0    0.0    0.       0.     1.0   8.0
    2     4.6   0.0    0.0    0.0    0.0    0.0    0.       0.     1.5   0.0
    3     4.3   0.0    0.0    0.0    0.0    0.0    0.       0.      .5   0.0
    4     4.7   9.8    0.0    0.0    0.0    0.0    0.       0.     2.0   8.0
    5     4.7   9.8    0.0    0.0    0.0    0.0    0.       0.     1.0   5.5
    6     4.7   9.9    0.0    0.0    0.0    0.0    0.       0.     1.0   6.0
    7     4.7   9.5    0.0    0.0    0.0    0.0    0.       0.     1.0   6.5
    8     4.7   9.8    0.0    0.0    0.0    0.0    0.       0.     1.0   7.0
    9     4.6   9.8    0.0    0.0    0.0    0.0    0.       0.     1.0   6.0
   10     4.5   9.8    0.0    0.0    0.0    0.0    0.       0.      .9   6.0
   11     4.4   0.0    0.0    0.0    0.0    0.0    0.       0.      .5   0.0
   12     4.6   0.0    0.0    0.0    0.0    0.0    0.       0.      .9   0.0
   13     4.6   9.7    0.0    0.0    0.0    0.0    0.       0.      .9   4.0
   14     4.7   9.8    0.0    0.0    0.0    0.0    0.       0.     1.5  10.0
   15     4.6   9.6    0.0    0.0    0.0    0.0    0.       0.     1.0   7.5
   16     4.6   9.8    0.0    0.0    0.0    0.0    0.       0.     1.3   8.0
   17     4.7   9.8    0.0    0.0    0.0    0.0    0.       0.     1.5   8.0
   18     4.7   9.8    0.0    0.0    0.0    0.0    0.       0.     1.5   8.0
   19     4.6   9.8    0.0    0.0    0.0    0.0    0.       0.     1.0   7.0
   20     4.6   0.0    0.0    0.0    0.0    0.0    0.       0.      .9   0.0


  MEAN    4.6   9.8    0.0    0.0    0.0    0.0    0.       0.     1.1   7.0

 STD DEV   .1    .1    0.0    0.0    0.0    0.0    0.       0.      .4   1.4

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA BUD KIMBAL         DATE 17  SEPT      1982
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE     BRANCH  VEG.  SEED
        VEG.  REPR.                              CLASS   PERCENT TWIG  STALK
                                                                 LNGTH LNGTH
*****************************************************************************
    1     5.1  11.0     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
    2     5.2   0.0     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
    3     5.2   0.0     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
    4     5.2  10.8     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
    5     5.2  10.5     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
    6     5.2  10.4     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
    7     5.1   0.0     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
    8     5.2  10.4     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
    9     5.1   0.0     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
   10     5.2   0.0     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
   11     5.0   0.0     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
   12     5.2   0.0     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
   13     5.1  10.3     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
   14     5.2  10.3     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
   15     5.3   0.0     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
   16     5.2  10.3     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
   17     5.3  10.4     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
   18     5.2  10.3     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
   19     5.2  10.2     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
   20     5.2   0.0     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0


     MEAN 5.2  10.4     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0

  STD DEV  .1    .2     0.0    0.0    0.0    0.0   0.       0.     0.0   0.0

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA CEDAR MTN   DATE 29 APRIL 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	2.5	0.0	40.0	0.0	0.0	0.0	0.	0.	.1	0.0
2	2.4	0.0	13.0	0.0	0.0	0.0	0.	0.	.1	0.0
3	2.5	0.0	30.0	0.0	0.0	0.0	0.	0.	.1	0.0
4	2.7	0.0	31.0	0.0	0.0	0.0	0.	0.	.1	0.0
5	2.7	0.0	29.0	0.0	0.0	0.0	0.	0.	.1	0.0
6	2.8	0.0	23.0	0.0	0.0	0.0	0.	0.	.1	0.0
7	2.6	0.0	36.0	0.0	0.0	0.0	0.	0.	.1	0.0
8	2.8	0.0	32.0	0.0	0.0	0.0	0.	0.	.1	0.0
9	2.9	0.0	36.0	0.0	0.0	0.0	0.	0.	.1	0.0
10	2.3	0.0	58.0	0.0	0.0	0.0	0.	0.	.1	0.0
11	2.6	0.0	48.0	0.0	0.0	0.0	0.	0.	.1	0.0
12	2.5	0.0	41.0	0.0	0.0	0.0	0.	0.	.1	0.0
13	2.5	0.0	37.0	0.0	0.0	0.0	0.	0.	.1	0.0
14	2.2	0.0	28.0	0.0	0.0	0.0	0.	0.	0.0	0.0
15	2.2	0.0	23.0	0.0	0.0	0.0	0.	0.	.1	0.0
16	2.4	0.0	30.0	0.0	0.0	0.0	0.	0.	.1	0.0
17	2.5	0.0	40.0	0.0	0.0	0.0	0.	0.	.1	0.0
18	2.3	0.0	20.6	0.0	0.0	0.0	0.	0.	.1	0.0
19	2.5	0.0	39.0	0.0	0.0	0.0	0.	0.	.1	0.0
20	2.2	0.0	38.0	0.0	0.0	0.0	0.	0.	.1	0.0
MEAN	2.5	0.0	33.6	0.0	0.0	0.0	0.	0.	.1	0.0
STD DEV	.2	0.0	10.0	0.0	0.0	0.0	0.	0.	.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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 ARTEMISIA TRIDENTATA   STUDY AREA CEDAR MTN          DATE 20  MAY        1982
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  PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW  NEW
  NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG. SEED
         VEG.  REPR.                              CLASS  PERCENT  TWIG STALK
                                                                  LNGTH LNGTH
*****************************************************************************
    1    3.2   0.0    44.0  113.0   70.0    0.0   0.       0.     0.0   0.0
    2    3.2   0.0    11.0   18.0    9.0    0.0   0.       0.     0.0   0.0
    3    3.2   0.0    33.0   74.0   36.0    0.0   0.       0.     0.0   0.0
    4    3.2   0.0    11.0   10.0   10.0    0.0   0.       0.     0.0   0.0
    5    3.2   0.0    30.0    0.0    0.0   58.0   0.      95.     0.0   0.0
    6    3.2   0.0    25.0   30.0   21.0    0.0   0.       0.     0.0   0.0
    7    3.2   0.0    39.5   59.0   27.0    0.0   0.       0.     0.0   0.0
    8    3.2   0.0    40.0   66.0   24.0    0.0   0.       0.     0.0   0.0
    9    3.2   0.0    34.0   46.0   29.0    0.0   0.       0.     0.0   0.0
   10    3.1   0.0    40.0  100.0   40.0    0.0   0.       0.     0.0   0.0
   11    3.1   0.0    50.0  130.0   90.0    0.0   0.       0.     0.0   0.0
   12    3.3   0.0    51.0  105.0   69.0    0.0   0.       0.     0.0   0.0
   13    3.3   0.0    41.0   68.0   27.0    0.0   0.       0.     0.0   0.0
   14    3.3   0.0    47.0  111.0  106.0    0.0   0.       0.     0.0   0.0
   15    3.3   0.0    35.0   49.0   29.0    0.0   0.       0.     0.0   0.0
   16    3.2   0.0    25.0   46.0   26.0    0.0   0.       0.     0.0   0.0
   17    3.2   0.0    32.0   48.0   22.0    0.0   0.       0.     0.0   0.0
   18    3.3   0.0    46.0   87.0   57.0    0.0   0.       0.     0.0   0.0
   19    3.0   0.0    29.0   36.0   22.0    0.0   0.       0.     0.0   0.0
   20    3.2   0.0    45.0   35.0   17.0    0.0   0.       0.     0.0   0.0


   MEAN  3.2   0.0    35.4   64.8   38.5   58.0   0.      95.     0.0   0.0

 STD DEV  .1   0.0    11.4   34.6   27.2    0.0   0.       0.     0.0   0.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA CEDAR MTN            DATE 02  JUNE      1982
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 PLANT  PHENOLOGICAL   PLANT   PLANT   PLANT   PLANT   PLANT    DEAD     NEW   NEW
 NO.    STAGE  SCORE   HGHT    LNGTH   WIDTH   DIAM    AGE      BRANCH   VEG.  SEED
          VEG.  REPR.                                  CLASS    PERCENT  TWIG  STALK
                                                                         LNGTH LNGTH
******************************************************************************
    1     3.3   9.2    46.0    0.0     0.0     0.0     0.         0.      .1   1.0
    2     3.3   9.2    11.5    0.0     0.0     0.0     0.         0.      .1   1.0
    3     3.3   9.3    34.0    0.0     0.0     0.0     0.         0.      .1    .5
    4     3.2   9.3    11.0    0.0     0.0     0.0     0.         0.     0.0    .3
    5     3.2   9.3    29.0    0.0     0.0     0.0     0.         0.     0.0    .3
    6     3.3   9.2    27.0    0.0     0.0     0.0     0.         0.      .5    .1
    7     3.3   9.2    40.0    0.0     0.0     0.0     0.         0.      .5   1.0
    8     3.3   9.3    37.0    0.0     0.0     0.0     0.         0.      .5   0.0
    9     3.3   9.2    45.0    0.0     0.0     0.0     0.         0.      .5   1.5
   10     3.3   9.2    53.0    0.0     0.0     0.0     0.         0.      .5   2.0
   11     3.2   9.3    50.0    0.0     0.0     0.0     0.         0.     0.0    .5
   12     3.3   9.2    40.0    0.0     0.0     0.0     0.         0.      .5   1.0
   13     3.3   9.3    43.0    0.0     0.0     0.0     0.         0.      .5    .5
   14     3.4   9.2    35.5    0.0     0.0     0.0     0.         0.      .5    .5
   15     3.3   0.0    27.0    0.0     0.0     0.0     0.         0.      .5   0.0
   16     3.4   9.2    16.0    0.0     0.0     0.0     0.         0.      .5    .8
   17     3.4   0.0    45.0    0.0     0.0     0.0     0.         0.      .5   0.0
   18     3.4   9.3    30.0    0.0     0.0     0.0     0.         0.      .8    .5
   19     3.3   0.0    42.0    0.0     0.0     0.0     0.         0.      .5   0.0
   20     3.3   0.0    42.0    0.0     0.0     0.0     0.         0.      .3   0.0


    MEAN  3.3   9.2    35.2    0.0     0.0     0.0     0.         0.      .4    .8

 STD DEV   .1    .1    12.1    0.0     0.0     0.0     0.         0.      .2    .5

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA CEDAR MTN          DATE 14  JUNE     1982
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  PLANT PHENOLOGICAL   PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
  NO.   STAGE SCORE    HGHT   LNGTH  WIDTH  DIAM   AGE     BRANCH  VEG.  SEED
         VEG.  REPR.                               CLASS   PERCENT TWIG  STALK
                                                                   LNGTH LNGTH
****************************************************************************
     1    3.7   9.3    34.5    0.0    0.0    0.0   0.        0.    0.0   3.0
     2    3.8   9.3    11.5    0.0    0.0    0.0   0.        0.    0.0   4.0
     3    3.8   9.3    36.0    0.0    0.0    0.0   0.        0.    0.0   3.4
     4    3.7   0.0    10.4    0.0    0.0    0.0   0.        0.    0.0   0.0
     5    3.9   9.3    46.0    0.0    0.0    0.0   0.        0.    0.0   5.0
     6    3.8   9.3    26.0    0.0    0.0    0.0   0.        0.    0.0   4.0
     7    3.8   9.3    38.0    0.0    0.0    0.0   0.        0.    0.0   3.8
     8    3.8   9.3    36.0    0.0    0.0    0.0   0.        0.    0.0   3.5
     9    3.8   9.3    45.0    0.0    0.0    0.0   0.        0.    0.0   5.0
    10    4.0   9.3    59.5    0.0    0.0    0.0   0.        0.    0.0   5.5
    11    3.7   9.3    47.0    0.0    0.0    0.0   0.        0.    0.0   4.0
    12    3.6   0.0    11.0    0.0    0.0    0.0   0.        0.    0.0   0.0
    13    3.8   9.3    49.0    0.0    0.0    0.0   0.        0.    0.0   5.5
    14    3.8   9.3    34.0    0.0    0.0    0.0   0.        0.    0.0   3.5
    15    3.7   9.3    24.5    0.0    0.0    0.0   0.        0.    0.0   1.5
    16    3.8   9.3    29.0    0.0    0.0    0.0   0.        0.    0.0   4.5
    17    3.6   9.2    41.5    0.0    0.0    0.0   0.        0.    0.0   3.0
    18    3.8   9.3    27.5    0.0    0.0    0.0   0.        0.    0.0   1.5
    19    3.7   9.2    43.0    0.0    0.0    0.0   0.        0.    0.0   2.5
    20    3.7   9.2    39.5    0.0    0.0    0.0   0.        0.    0.0   3.0


   MEAN   3.8   9.3    34.4    0.0    0.0    0.0   0.        0.    0.0   3.7

 STD DEV   .1    .0    13.2    0.0    0.0    0.0   0.        0.    0.0   1.2

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
```

ARTEMISIA TRIDENTATA   STUDY AREA CEDAR MTN   DATE 29 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.0	9.4	0.0	0.0	0.0	0.0	0.	0.	1.3	5.0
2	3.8	9.3	0.0	0.0	0.0	0.0	0.	0.	.9	4.0
3	3.9	9.3	0.0	0.0	0.0	0.0	0.	0.	.9	4.0
4	3.8	0.0	0.0	0.0	0.0	0.0	0.	0.	.4	0.0
5	3.8	9.5	0.0	0.0	0.0	0.0	0.	0.	.8	5.0
6	3.8	9.5	0.0	0.0	0.0	0.0	0.	0.	.4	4.0
7	3.9	9.5	0.0	0.0	0.0	0.0	0.	0.	1.0	4.5
8	4.0	9.5	0.0	0.0	0.0	0.0	0.	0.	1.2	3.5
9	3.5	9.5	0.0	0.0	0.0	0.0	0.	0.	.7	6.0
10	4.1	9.5	0.0	0.0	0.0	0.0	0.	0.	1.3	8.5
11	3.9	9.5	0.0	0.0	0.0	0.0	0.	0.	.9	5.0
12	4.2	9.4	0.0	0.0	0.0	0.0	0.	0.	3.5	6.0
13	3.8	9.5	0.0	0.0	0.0	0.0	0.	0.	.7	5.0
14	4.2	9.3	0.0	0.0	0.0	0.0	0.	0.	2.0	3.0
15	4.0	9.5	0.0	0.0	0.0	0.0	0.	0.	1.0	5.0
16	3.8	9.5	0.0	0.0	0.0	0.0	0.	0.	.5	4.5
17	3.8	9.5	0.0	0.0	0.0	0.0	0.	0.	.5	4.0
18	3.6	0.0	0.0	0.0	0.0	0.0	0.	0.	.6	0.0
19	3.5	0.0	0.0	0.0	0.0	0.0	0.	0.	.6	0.0
20	3.8	9.5	0.0	0.0	0.0	0.0	0.	0.	.5	4.5
MEAN	3.9	9.5	0.0	0.0	0.0	0.0	0.	0.	1.0	4.8
STD DEV	.2	.1	0.0	0.0	0.0	0.0	0.	0.	.7	1.2

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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 ARTEMISIA TRIDENTATA   STUDY AREA CEDAR MTN          DATE 11  JULY      1982
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  PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW  NEW
  NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG. SEED
         VEG.  REPR.                              CLASS  PERCENT  TWIG STALK
                                                                  LNGTH LNGTH
*****************************************************************************
    1    4.0   9.7    0.0    0.0    0.0    0.0    0.       0.      .7   8.0
    2    4.0   0.0    0.0    0.0    0.0    0.0    0.       0.      .7   0.0
    3    4.0   9.7    0.0    0.0    0.0    0.0    0.       0.     1.0   8.0
    4    3.9   9.7    0.0    0.0    0.0    0.0    0.       0.      .8   7.0
    5    4.0   9.6    0.0    0.0    0.0    0.0    0.       0.     1.0   7.0
    6    4.0   9.7    0.0    0.0    0.0    0.0    0.       0.      .8   6.0
    7    4.0   9.6    0.0    0.0    0.0    0.0    0.       0.      .8   8.0
    8    4.0   9.7    0.0    0.0    0.0    0.0    0.       0.      .6   8.0
    9    4.0   9.7    0.0    0.0    0.0    0.0    0.       0.      .6   7.0
   10    4.0   9.7    0.0    0.0    0.0    0.0    0.       0.     1.0  10.0
   11    4.0   9.7    0.0    0.0    0.0    0.0    0.       0.      .8  10.0
   12    4.0   9.6    0.0    0.0    0.0    0.0    0.       0.      .9   8.0
   13    4.0   9.6    0.0    0.0    0.0    0.0    0.       0.      .8   7.0
   14    4.0   9.6    0.0    0.0    0.0    0.0    0.       0.      .5   4.0
   15    4.0   9.6    0.0    0.0    0.0    0.0    0.       0.      .6  10.0
   16    4.0   9.6    0.0    0.0    0.0    0.0    0.       0.      .6   9.0
   17    3.9   9.6    0.0    0.0    0.0    0.0    0.       0.      .6   7.0
   18    4.1   0.0    0.0    0.0    0.0    0.0    0.       0.      .9   0.0
   19    4.0   9.6    0.0    0.0    0.0    0.0    0.       0.      .7   5.0
   20    4.0   9.6    0.0    0.0    0.0    0.0    0.       0.      .5   6.0


    MEAN 4.0   9.6    0.0    0.0    0.0    0.0    0.       0.      .7   7.5

 STD DEV  .0    .1    0.0    0.0    0.0    0.0    0.       0.      .2   1.7

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA CEDAR MTN           DATE 26  JULY      1982
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   FGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
        VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                 LNGTH LNGTH
**********************************************************************************
   1     4.4   9.6   47.0    0.0    0.0    0.0   0.        0.    1.0   7.0
   2     4.4   0.0   12.0    0.0    0.0    0.0   0.        0.    1.0   0.0
   3     4.4   9.5   35.0    0.0    0.0    0.0   0.        0.     .9   8.0
   4     4.3   9.5   33.0    0.0    0.0    0.0   0.        0.     .6   5.0
   5     4.5   9.6   47.0    0.0    0.0    0.0   0.        0.    1.3   6.0
   6     3.4   9.6   32.0    0.0    0.0    0.0   0.        0.    1.0   7.0
   7     4.3   9.6   43.0    0.0    0.0    0.0   0.        0.     .6   8.0
   8     3.3   9.6   40.0    0.0    0.0    0.0   0.        0.     .6   7.0
   9     4.3   9.6   44.0    0.0    0.0    0.0   0.        0.     .6  10.0
  10     4.6   9.6   60.0    0.0    0.0    0.0   0.        0.    1.5  12.0
  11     4.4   9.6   58.0    0.0    0.0    0.0   0.        0.     .5  10.0
  12     4.5   9.6   49.0    0.0    0.0    0.0   0.        0.     .9   9.0
  13     4.3   9.6   52.0    0.0    0.0    0.0   0.        0.     .5   9.0
  14     4.5   9.5   37.0    0.0    0.0    0.0   0.        0.     .8   7.0
  15     4.4   9.5   27.0    0.0    0.0    0.0   0.        0.     .6   7.0
  16     4.4   9.6   36.0    0.0    0.0    0.0   0.        0.     .6  10.0
  17     4.3   9.5   49.0    0.0    0.0    0.0   0.        0.     .4   5.0
  18     4.5   0.0   30.0    0.0    0.0    0.0   0.        0.    1.0   0.0
  19     4.3   9.5   47.0    0.0    0.0    0.0   0.        0.     .4   4.0
  20     4.3   9.5   44.0    0.0    0.0    0.0   0.        0.     .4  12.0


   MEAN  4.3   9.6   41.1    0.0    0.0    0.0   0.        0.     .8   7.9

STD DEV   .3    .1   11.3    0.0    0.0    0.0   0.        0.     .3   2.3

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA CEDAR MTN          DATE 10  AUGUST   1982
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 PLANT PHENOLOGICAL   PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE    HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
        VEG.  REPR.                               CLASS  PERCENT  TWIG  STALK
                                                                  LNGTH LNGTH
***********************************************************************************
   1     4.9   9.7    0.0    0.0    0.0    0.0    0.       0.    1.0   6.5
   2     4.9   0.0    0.0    0.0    0.0    0.0    0.       0.    1.0   0.0
   3     4.9   9.7    0.0    0.0    0.0    0.0    0.       0.    1.0   6.0
   4     4.9   0.0    0.0    0.0    0.0    0.0    0.       0.     .5   0.0
   5     4.9   9.7    0.0    0.0    0.0    0.0    0.       0.     .8   7.0
   6     4.9   9.7    0.0    0.0    0.0    0.0    0.       0.     .6   8.0
   7     4.9   9.7    0.0    0.0    0.0    0.0    0.       0.     .6   7.0
   8     4.9   9.7    0.0    0.0    0.0    0.0    0.       0.     .8   7.0
   9     4.9   9.6    0.0    0.0    0.0    0.0    0.       0.     .5   8.0
  10     4.9   9.8    0.0    0.0    0.0    0.0    0.       0.     .6  10.0
  11     4.9   9.7    0.0    0.0    0.0    0.0    0.       0.     .7   8.0
  12     4.9   9.7    0.0    0.0    0.0    0.0    0.       0.    1.0  10.0
  13     4.9   9.8    0.0    0.0    0.0    0.0    0.       0.     .7  11.0
  14     4.9   9.7    0.0    0.0    0.0    0.0    0.       0.     .7   6.0
  15     4.9   9.7    0.0    0.0    0.0    0.0    0.       0.     .5   9.0
  16     4.9   9.7    0.0    0.0    0.0    0.0    0.       0.     .6   8.0
  17     4.8   9.6    0.0    0.0    0.0    0.0    0.       0.     .5   5.0
  18     4.9   0.0    0.0    0.0    0.0    0.0    0.       0.    1.0   0.0
  19     4.9   9.6    0.0    0.0    0.0    0.0    0.       0.     .4   4.0
  20     4.9   9.7    0.0    0.0    0.0    0.0    0.       0.     .5   8.0


   MEAN  4.9   9.7    0.0    0.0    0.0    0.0    0.       0.     .7   7.6

 STD DEV  .0    .1    0.0    0.0    0.0    0.0    0.       0.     .2   1.8

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA CUMBER 3   DATE 30 APRIL 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE		PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
	VEG.	REPR.								
1	2.7	0.0	73.0	0.0	0.0	0.0	0.	0.	0.0	0.0
2	2.7	0.0	28.0	0.0	0.0	0.0	0.	0.	0.0	0.0
3	2.7	0.0	34.0	0.0	0.0	0.0	0.	0.	0.0	0.0
4	2.6	0.0	53.0	0.0	0.0	0.0	0.	0.	0.0	0.0
5	2.7	0.0	67.0	0.0	0.0	0.0	0.	0.	0.0	0.0
6	2.8	0.0	38.0	0.0	0.0	0.0	0.	0.	0.0	0.0
7	2.6	0.0	45.0	0.0	0.0	0.0	0.	0.	0.0	0.0
8	2.4	0.0	53.0	0.0	0.0	0.0	0.	0.	0.0	0.0
9	2.6	0.0	17.0	0.0	0.0	0.0	0.	0.	0.0	0.0
10	2.2	0.0	69.0	0.0	0.0	0.0	0.	0.	0.0	0.0
11	2.4	0.0	29.0	0.0	0.0	0.0	0.	0.	0.0	0.0
12	2.3	0.0	56.0	0.0	0.0	0.0	0.	0.	0.0	0.0
13	2.4	0.0	66.0	0.0	0.0	0.0	0.	0.	0.0	0.0
14	2.5	0.0	69.0	0.0	0.0	0.0	0.	0.	0.0	0.0
15	2.4	0.0	59.0	0.0	0.0	0.0	0.	0.	0.0	0.0
16	2.3	0.0	88.0	0.0	0.0	0.0	0.	0.	0.0	0.0
17	2.6	0.0	98.0	0.0	0.0	0.0	0.	0.	0.0	0.0
18	2.3	0.0	48.0	0.0	0.0	0.0	0.	0.	0.0	0.0
19	2.4	0.0	54.0	0.0	0.0	0.0	0.	0.	0.0	0.0
20	2.4	0.0	35.0	0.0	0.0	0.0	0.	0.	0.0	0.0
MEAN	2.5	0.0	54.0	0.0	0.0	0.0	0.	0.	0.0	0.0
STD DEV	.2	0.0	20.6	0.0	0.0	0.0	0.	0.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMISIA TRIDENTATA   STUDY AREA CUMBER 3          DATE 03  JUNE      1982
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
        VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                 LNGTH LNGTH
********************************************************************************
    1     3.5   0.0    74.0    0.0    0.0    0.0   0.       0.     1.0   0.0
    2     3.4   0.0    36.0    0.0    0.0    0.0   0.       0.      .5   0.0
    3     3.4   9.2     0.0    0.0    0.0    0.0   0.       0.      .5    .5
    4     3.4   9.2    55.0    0.0    0.0    0.0   0.       0.      .5    .3
    5     3.3   9.2    44.0    0.0    0.0    0.0   0.       0.      .3    .5
    6     3.3   0.0    40.0    0.0    0.0    0.0   0.       0.      .3   0.0
    7     3.3   0.0    46.0    0.0    0.0    0.0   0.       0.      .2   0.0
    8     3.3   0.0    62.0    0.0    0.0    0.0   0.       0.      .3   0.0
    9     3.4   9.2    21.0    0.0    0.0    0.0   0.       0.      .4    .5
   10     3.3   0.0    75.0    0.0    0.0    0.0   0.       0.      .2   0.0
   11     3.4   9.2    32.0    0.0    0.0    0.0   0.       0.      .4    .4
   12     3.4   9.2    60.0    0.0    0.0    0.0   0.       0.      .4    .3
   13     3.4   0.0    83.0    0.0    0.0    0.0   0.       0.      .5   0.0
   14     3.4   0.0    70.0    0.0    0.0    0.0   0.       0.      .3   0.0
   15     3.4   0.0    68.0    0.0    0.0    0.0   0.       0.      .4   0.0
   16     3.3   0.0    69.0    0.0    0.0    0.0   0.       0.      .3   0.0
   17     3.5   9.2    96.0    0.0    0.0    0.0   0.       0.      .5   1.0
   18     3.4   0.0    50.0    0.0    0.0    0.0   0.       0.      .4   0.0
   19     3.4   9.2    58.0    0.0    0.0    0.0   0.       0.      .4    .4
   20     3.4   0.0    32.0    0.0    0.0    0.0   0.       0.      .8   0.0


   MEAN   3.4   9.2    56.4    0.0    0.0    0.0   0.       0.      .4    .5

 STD DEV   .1    .0    19.6    0.0    0.0    0.0   0.       0.      .2    .2

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA CUMBER 3           DATE 15  JUNE      1982
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  PLANT  PHENOLOGICAL   PLANT   PLANT   PLANT   PLANT   PLANT    DEAD     NEW   NEW
  NO.    STAGE  SCORE   HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH    VEG.  SEED
          VEG.  REPR.                                   CLASS   PERCENT   TWIG  STALK
                                                                          LNGTH LNGTH
*******************************************************************************************
     1    3.6    9.3    47.0     0.0     0.0     0.0    0.         0.     0.0   1.0
     2    3.7    9.3    35.0     0.0     0.0     0.0    0.         0.     0.0   1.5
     3    3.7    9.3    36.0     0.0     0.0     0.0    0.         0.     0.0   1.0
     4    3.7    9.2    55.0     0.0     0.0     0.0    0.         0.     0.0   3.0
     5    3.7    9.2    47.0     0.0     0.0     0.0    0.         0.     0.0   3.0
     6    3.7    9.3    44.0     0.0     0.0     0.0    0.         0.     0.0   2.0
     7    3.6    9.3    45.5     0.0     0.0     0.0    0.         0.     0.0   1.5
     8    3.7    9.2    58.0     0.0     0.0     0.0    0.         0.     0.0   3.5
     9    3.6    9.2    34.0     0.0     0.0     0.0    0.         0.     0.0   3.0
    10    3.6    9.3    72.0     0.0     0.0     0.0    0.         0.     0.0   2.5
    11    3.6    9.2    29.5     0.0     0.0     0.0    0.         0.     0.0   3.5
    12    3.6    9.3    32.0     0.0     0.0     0.0    0.         0.     0.0   2.0
    13    3.7    9.2    76.0     0.0     0.0     0.0    0.         0.     0.0   3.0
    14    3.6    9.2    72.0     0.0     0.0     0.0    0.         0.     0.0   3.5
    15    3.6    9.2    61.0     0.0     0.0     0.0    0.         0.     0.0   2.0
    16    3.6    9.2    63.0     0.0     0.0     0.0    0.         0.     0.0   3.0
    17    3.7    9.2    99.0     0.0     0.0     0.0    0.         0.     0.0   3.5
    18    3.6    9.3    47.0     0.0     0.0     0.0    0.         0.     0.0   1.0
    19    3.6    9.3    55.0     0.0     0.0     0.0    0.         0.     0.0   2.5
    20    3.6    9.2    37.0     0.0     0.0     0.0    0.         0.     0.0   4.0


     MEAN 3.6    9.2    52.3     0.0     0.0     0.0    0.         0.     0.0   2.5

  STD DEV  .1     .1    17.8     0.0     C.0     0.0    0.         0.     0.0    .9

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA CUMBER 3   DATE 29 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.0	9.5	0.0	0.0	0.0	0.0	0.	0.	1.3	6.0
2	3.5	9.3	0.0	0.0	0.0	0.0	0.	0.	.5	5.0
3	4.0	9.2	0.0	0.0	0.0	0.0	0.	0.	1.2	4.0
4	4.0	9.4	0.0	0.0	0.0	0.0	0.	0.	1.8	6.5
5	4.0	0.0	0.0	0.0	0.0	0.0	0.	0.	2.0	0.0
6	3.8	9.3	0.0	0.0	0.0	0.0	0.	0.	1.0	3.5
7	3.9	9.3	0.0	0.0	0.0	0.0	0.	0.	.9	3.0
8	4.0	9.4	0.0	0.0	0.0	0.0	0.	0.	1.2	6.0
9	3.8	9.4	0.0	0.0	0.0	0.0	0.	0.	.5	6.0
10	3.9	9.3	0.0	0.0	0.0	0.0	0.	0.	1.0	5.0
11	4.0	9.5	0.0	0.0	0.0	0.0	0.	0.	1.5	5.0
12	4.0	9.3	0.0	0.0	0.0	0.0	0.	0.	2.0	4.0
13	3.8	9.4	0.0	0.0	0.0	0.0	0.	0.	.8	6.0
14	3.9	9.3	0.0	0.0	0.0	0.0	0.	0.	.9	4.5
15	4.0	9.5	0.0	0.0	0.0	0.0	0.	0.	1.2	5.0
16	3.9	9.5	0.0	0.0	0.0	0.0	0.	0.	.9	4.5
17	4.0	9.4	0.0	0.0	0.0	0.0	0.	0.	1.3	4.5
18	3.8	0.0	0.0	0.0	0.0	0.0	0.	0.	.8	0.0
19	3.5	0.0	0.0	0.0	0.0	0.0	0.	0.	.5	0.0
20	4.2	0.0	0.0	0.0	0.0	0.0	0.	0.	3.0	0.0
MEAN	3.9	9.4	0.0	0.0	0.0	0.0	0.	0.	1.2	4.9
STD DEV	.2	.1	0.0	0.0	0.0	0.0	0.	0.	.6	1.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMISIA TRIDENTATA   STUDY AREA CUMBER 3          DATE 11  JULY      1982
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD     NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH    VEG.  SEED
        VEG.  REPR.                              CLASS  PERCENT   TWIG  STALK
                                                                  LNGTH LNGTH
*****************************************************************************
   1    4.1   9.6    0.0    0.0    0.0    0.0    0.       0.        .8  7.0
   2    4.2   9.5    0.0    0.0    0.0    0.0    0.       0.        .6  8.0
   3    4.2   0.0    0.0    0.0    0.0    0.0    0.       0.       1.0  0.0
   4    4.3   9.5    0.0    0.0    0.0    0.0    0.       0.       2.0  8.0
   5    4.2   9.5    0.0    0.0    0.0    0.0    0.       0.       1.5  7.0
   6    4.1   9.6    0.0    0.0    0.0    0.0    0.       0.       1.7  7.0
   7    4.0   9.6    0.0    0.0    0.0    0.0    0.       0.        .8  6.5
   8    4.1   9.5    0.0    0.0    0.0    0.0    0.       0.        .9  9.0
   9    4.2   9.5    0.0    0.0    0.0    0.0    0.       0.        .9  9.0
  10    4.1   9.5    0.0    0.0    0.0    0.0    0.       0.       1.0  8.0
  11    4.1   9.5    0.0    0.0    0.0    0.0    0.       0.        .9  9.0
  12    4.1   9.6    0.0    0.0    0.0    0.0    0.       0.        .8  8.0
  13    4.2   9.6    0.0    0.0    0.0    0.0    0.       0.       1.0  8.0
  14    4.0   9.6    0.0    0.0    0.0    0.0    0.       0.        .6  8.0
  15    4.2   9.6    0.0    0.0    0.0    0.0    0.       0.       1.0  9.0
  16    4.0   9.5    0.0    0.0    0.0    0.0    0.       0.        .6  7.0
  17    4.2   9.6    0.0    0.0    0.0    0.0    0.       0.        .9  9.0
  18    4.1   0.0    0.0    0.0    0.0    0.0    0.       0.        .6  0.0
  19    4.1   0.0    0.0    0.0    0.0    0.0    0.       0.       1.0  0.0
  20    4.1   0.0    0.0    0.0    0.0    0.0    0.       0.        .6  0.0


   MEAN 4.1   9.6    0.0    0.0    0.0    0.0    0.       0.       1.0  8.0

STD DEV  .1    .1    0.0    0.0    0.0    0.0    0.       0.        .4   .9

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
 ARTEMISIA TRIDENTATA   STUDY AREA CUMBER 3          DATE 27  JULY      1982
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  PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
  NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
         VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                  LNGTH LNGTH
*************************************************************************************
     1    4.6   9.6    76.0   0.0    0.0    0.0   0.        0.     2.0  11.0
     2    4.6   9.6    41.0   0.0    0.0    0.0   0.        0.     1.5  10.5
     3    4.5   9.6    40.0   0.0    0.0    0.0   0.        0.     1.0   4.0
     4    4.6   9.6    60.0   0.0    0.0    0.0   0.        0.     2.2  11.5
     5    4.6   9.6    53.0   0.0    0.0    0.0   0.        0.     2.0  10.0
     6    4.6   9.6    46.0   0.0    0.0    0.0   0.        0.     1.8   6.0
     7    4.4   9.6    48.0   0.0    0.0    0.0   0.        0.      .8  10.0
     8    4.5   9.6    74.0   0.0    0.0    0.0   0.        0.     1.5  12.0
     9    4.4   9.5    57.0   0.0    0.0    0.0   0.        0.     1.0  10.5
    10    4.6   9.6    67.0   0.0    0.0    0.0   0.        0.     2.0   8.0
    11    4.6   9.5    31.0   0.0    0.0    0.0   0.        0.     2.5  12.9
    12    4.6   9.5    78.0   0.0    0.0    0.0   0.        0.     2.0  12.0
    13    4.5   9.5    83.0   0.0    0.0    0.0   0.        0.     1.5  10.0
    14    4.4   9.6    71.0   0.0    0.0    0.0   0.        0.     1.0   8.5
    15    4.4   9.6    67.0   0.0    0.0    0.0   0.        0.     1.0   7.0
    16    4.5   9.6    70.0   0.0    0.0    0.0   0.        0.     1.8   8.0
    17    4.6   9.5   105.0   0.0    0.0    0.0   0.        0.     2.0  10.0
    18    4.3   0.0    53.0   0.0    0.0    0.0   0.        0.      .8   0.0
    19    4.0   9.5    58.0   0.0    0.0    0.0   0.        0.     1.5   6.0
    20    4.7   0.0    40.0   0.0    0.0    0.0   0.        0.     3.5   0.0


      MEAN  4.5   9.6    60.9   0.0    0.0    0.0   0.        0.     1.7   9.3

   STD DEV   .2    .0    17.9   0.0    0.0    0.0   0.        0.      .7   2.4

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA CUMBER 3   DATE 09 AUGUST 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.9	9.7	0.0	0.0	0.0	0.0	0.	0.	1.0	10.0
2	4.9	9.8	0.0	0.0	0.0	0.0	0.	0.	1.0	12.0
3	4.9	0.0	0.0	0.0	0.0	0.0	0.	0.	1.0	0.0
4	4.9	9.7	0.0	0.0	0.0	0.0	0.	0.	1.0	10.0
5	4.9	9.7	0.0	0.0	0.0	0.0	0.	0.	1.0	8.0
6	4.9	9.7	0.0	0.0	0.0	0.0	0.	0.	.9	6.0
7	4.9	9.6	0.0	0.0	0.0	0.0	0.	0.	.8	5.0
8	5.0	9.8	0.0	0.0	0.0	0.0	0.	0.	.8	10.0
9	4.9	9.6	0.0	0.0	0.0	0.0	0.	0.	1.0	11.0
10	4.8	9.7	0.0	0.0	0.0	0.0	0.	0.	.5	10.0
11	4.9	9.7	0.0	0.0	0.0	0.0	0.	0.	1.0	10.0
12	4.9	9.6	0.0	0.0	0.0	0.0	0.	0.	1.5	9.0
13	4.9	9.7	0.0	0.0	0.0	0.0	0.	0.	1.0	8.0
14	4.9	9.8	0.0	0.0	0.0	0.0	0.	0.	.9	8.0
15	4.8	9.7	0.0	0.0	0.0	0.0	0.	0.	.8	8.0
16	4.9	9.8	0.0	0.0	0.0	0.0	0.	0.	.8	10.0
17	4.9	9.8	0.0	0.0	0.0	0.0	0.	0.	1.0	10.0
18	5.0	0.0	0.0	0.0	0.0	0.0	0.	0.	.8	0.0
19	4.9	9.6	0.0	0.0	0.0	0.0	0.	0.	1.0	3.0
20	4.9	0.0	0.0	0.0	0.0	0.0	0.	0.	1.5	0.0
MEAN	4.9	9.7	0.0	0.0	0.0	0.0	0.	0.	1.0	8.7
STD DEV	.0	.1	0.0	0.0	0.0	0.0	0.	0.	.2	2.3

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA   STUDY AREA CUMBER 3   DATE 11 SEPT 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.9	10.2	0.0	0.0	0.0	0.0	0.	0.	3.0	10.0
2	4.9	10.2	0.0	0.0	0.0	0.0	0.	0.	2.0	8.0
3	4.9	0.0	0.0	0.0	0.0	0.0	0.	0.	2.0	0.0
4	4.9	10.2	0.0	0.0	0.0	0.0	0.	0.	3.5	10.5
5	4.9	10.0	0.0	0.0	0.0	0.0	0.	0.	2.5	7.0
6	4.9	10.0	0.0	0.0	0.0	0.0	0.	0.	2.0	6.5
7	4.9	10.1	0.0	0.0	0.0	0.0	0.	0.	2.5	8.0
8	4.9	10.2	0.0	0.0	0.0	0.0	0.	0.	2.0	10.0
9	4.9	0.0	0.0	0.0	0.0	0.0	0.	0.	4.0	0.0
10	4.9	10.1	0.0	0.0	0.0	0.0	0.	0.	3.0	9.0
11	4.9	10.0	0.0	0.0	0.0	0.0	0.	0.	3.0	8.0
12	4.9	10.0	0.0	0.0	0.0	0.0	0.	0.	2.5	10.0
13	4.9	10.2	0.0	0.0	0.0	0.0	0.	0.	3.0	10.0
14	4.7	10.2	0.0	0.0	0.0	0.0	0.	0.	1.5	10.0
15	4.9	10.0	0.0	0.0	0.0	0.0	0.	0.	2.0	9.0
16	4.7	10.2	0.0	0.0	0.0	0.0	0.	0.	1.5	9.0
17	4.9	10.2	0.0	0.0	0.0	0.0	0.	0.	2.0	9.0
18	4.7	0.0	0.0	0.0	0.0	0.0	0.	0.	1.5	0.0
19	4.9	10.2	0.0	0.0	0.0	0.0	0.	0.	2.5	5.0
20	4.9	10.2	0.0	0.0	0.0	0.0	0.	0.	3.0	8.0
MEAN	4.9	10.1	0.0	0.0	0.0	0.0	0.	0.	2.5	8.6
STD DEV	.1	.1	0.0	0.0	0.0	0.0	0.	0.	.7	1.5

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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 ARTEMISIA TRIDENTATA   STUDY AREA DEMER              DATE 30  APRIL    1982
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  PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
  NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
         VEG.  REPR.                               CLASS  PERCENT  TWIG  STALK
                                                                   LNGTH LNGTH
**************************************************************************
     1     3.2   0.0    0.0   32.5    0.0    0.0   0.        0.    0.0   0.0
     2     3.4   0.0    0.0   32.0    0.0    0.0   0.        0.    0.0   0.0
     3     3.3   0.0    0.0   16.0    0.0    0.0   0.        0.    0.0   0.0
     4     3.2   0.0    0.0   19.0    0.0    0.0   0.        0.    0.0   0.0
     5     3.2   0.0    0.0   23.5    0.0    0.0   0.        0.    0.0   0.0
     6     3.3   0.0    0.0   27.5    0.0    0.0   0.        0.    0.0   0.0
     7     3.0   0.0    0.0    9.5    0.0    0.0   0.        0.    0.0   0.0
     8     3.3   0.0    0.0   29.0    0.0    0.0   0.        0.    0.0   0.0
     9     3.3   0.0    0.0   37.0    0.0    0.0   0.        0.    0.0   0.0
    10     3.3   0.0    0.0   46.0    0.0    0.0   0.        0.    0.0   0.0
    11     3.3   0.0    0.0   41.0    0.0    0.0   0.        0.    0.0   0.0
    12     3.2   0.0    0.0   30.5    0.0    0.0   0.        0.    0.0   0.0
    13     3.2   0.0    0.0   26.5    0.0    0.0   0.        0.    0.0   0.0
    14     3.1   0.0    0.0   38.0    0.0    0.0   0.        0.    0.0   0.0
    15     3.2   0.0    0.0   55.0    0.0    0.0   0.        0.    0.0   0.0
    16     3.2   0.0    0.0   57.0    0.0    0.0   0.        0.    0.0   0.0
    17     3.3   0.0    0.0   22.5    0.0    0.0   0.        0.    0.0   0.0
    18     3.2   0.0    0.0   35.0    0.0    0.0   0.        0.    0.0   0.0
    19     2.0   0.0    0.0   15.0    0.0    0.0   0.        0.    0.0   0.0
    20     3.3   0.0    0.0   27.0    0.0    0.0   0.        0.    0.0   0.0


   MEAN  3.2   0.0    0.0   31.0    0.0    0.0   0.        0.    0.0   0.0

 STD DEV  .3   0.0    0.0   12.5    0.0    0.0   0.        0.    0.0   0.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
 ARTEMISIA TRIDENTATA   STUDY AREA DEMER            DATE 18  MAY       1982
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  PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
  NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
         VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                  LNGTH LNGTH
********************************************************************************
    1     3.2   0.0   31.0   41.0   15.0    0.0   0.       0.     0.0   0.0
    2     3.3   0.0   36.0   65.0   47.0    0.0   0.       0.     0.0   0.0
    3     3.2   0.0   17.5   26.0   17.0    0.0   0.       0.     0.0   0.0
    4     3.2   0.0   18.0   45.0   34.0    0.0   0.       0.     0.0   0.0
    5     3.2   0.0   25.0   47.0   23.0    0.0   0.       0.     0.0   0.0
    6     3.3   0.0   24.5   53.0   29.0    0.0   0.       0.     0.0   0.0
    7     3.2   0.0   11.0   14.0   13.0    0.0   0.       0.     0.0   0.0
    8     3.2   0.0   27.0   67.0   54.0    0.0   0.       0.     0.0   0.0
    9     3.2   0.0   35.0   55.0   30.0    0.0   0.       0.     0.0   0.0
   10     3.3   0.0   48.5   70.0   46.0    0.0   0.       0.     0.0   0.0
   11     3.4   0.0   42.0   83.0   55.0    0.0   0.       0.     0.0   0.0
   12     3.3   0.0   30.0   70.0   47.0    0.0   0.       0.     0.0   0.0
   13     3.3   0.0   25.0   44.0   14.0    0.0   0.       0.     0.0   0.0
   14     3.4   0.0   36.0   39.0   39.0    0.0   0.       0.     0.0   0.0
   15     3.3   0.0   51.0   42.0   32.0    0.0   0.       0.     0.0   0.0
   16     3.2   0.0   21.0   28.0   14.0    0.0   0.       0.     0.0   0.0
   17     3.2   0.0   21.0   48.0   31.0    0.0   0.       0.     0.0   0.0
   18     3.3   0.0   30.0   68.0   44.0    0.0   0.       0.     0.0   0.0
   19     3.3   0.0   13.0   26.0   11.0    0.0   0.       0.     0.0   0.0
   20     3.3   0.0   24.0   44.0   29.0    0.0   0.       0.     0.0   0.0


     MEAN  3.3  0.0   28.3   48.8   31.2    0.0   0.       0.     0.0   0.0

  STD DEV   .1  0.0   10.8   17.8   14.3    0.0   0.       0.     0.0   0.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA DEMER                 DATE 02  JUNE      1982
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 PLANT  PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE     BRANCH  VEG.  SEED
        VEG.  REPR.                               CLASS   PERCENT TWIG  STALK
                                                                  LNGTH LNGTH
*******************************************************************************
   1     3.5   9.1   28.8    0.0    0.0    0.0    0.       0.     0.0   3.0
   2     3.5   9.0   35.5    0.0    0.0    0.0    0.       0.     0.0   0.0
   3     3.5   0.0   16.0    0.0    0.0    0.0    0.       0.     0.0   0.0
   4     3.4   9.0   16.0    0.0    0.0    0.0    0.       0.     0.0   0.0
   5     3.5   0.0   24.0    0.0    0.0    0.0    0.       0.     0.0   0.0
   6     3.5   9.1   22.0    0.0    0.0    0.0    0.       0.     0.0   1.0
   7     3.4   0.0    8.0    0.0    0.0    0.0    0.       0.     0.0   0.0
   8     3.5   9.0   22.0    0.0    0.0    0.0    0.       0.     0.0   0.0
   9     3.5   9.1   35.5    0.0    0.0    0.0    0.       0.     0.0   1.0
  10     3.5   9.0   43.0    0.0    0.0    0.0    0.       0.     0.0   0.0
  11     3.6   9.0   46.0    0.0    0.0    0.0    0.       0.     0.0   0.0
  12     3.5   0.0   26.0    0.0    0.0    0.0    0.       0.     0.0   0.0
  13     3.6   9.0   25.0    0.0    0.0    0.0    0.       0.     0.0   0.0
  14     3.6   9.1   39.0    0.0    0.0    0.0    0.       0.     0.0   1.0
  15     3.6   9.0   54.0    0.0    0.0    0.0    0.       0.     0.0   0.0
  16     3.5   0.0   22.0    0.0    0.0    0.0    0.       0.     0.0   0.0
  17     3.5   0.0   21.0    0.0    0.0    0.0    0.       0.     0.0   0.0
  18     3.6   9.1   31.0    0.0    0.0    0.0    0.       0.     0.0   2.0
  19     3.4   0.0    6.0    0.0    0.0    0.0    0.       0.     0.0   0.0
  20     3.5   9.0   24.0    0.0    0.0    0.0    0.       0.     0.0   0.0


   MEAN  3.5   9.0   27.2    0.0    0.0    0.0    0.       0.     0.0   1.6

STD DEV   .1    .1   12.2    0.0    0.0    0.0    0.       0.     0.0    .9

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA STUDY AREA DEMER DATE 29 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.9	9.3	30.0	0.0	0.0	0.0	0.	0.	0.0	4.5
2	3.9	9.3	35.0	0.0	0.0	0.0	0.	0.	0.0	2.5
3	4.0	0.0	19.0	0.0	0.0	0.0	0.	0.	0.0	0.0
4	4.0	9.4	16.0	0.0	0.0	0.0	0.	0.	0.0	3.5
5	4.0	0.0	25.0	0.0	0.0	0.0	0.	0.	0.0	0.0
6	3.9	9.4	19.5	0.0	0.0	0.0	0.	0.	0.0	4.0
7	3.9	0.0	7.5	0.0	0.0	0.0	0.	0.	0.0	0.0
8	3.9	9.3	21.5	0.0	0.0	0.0	0.	0.	0.0	3.5
9	4.0	9.4	38.5	0.0	0.0	0.0	0.	0.	0.0	9.5
10	4.0	0.0	41.0	0.0	0.0	0.0	0.	0.	0.0	0.0
11	3.9	0.0	47.0	0.0	0.0	0.0	0.	0.	0.0	4.0
12	3.9	0.0	26.0	0.0	0.0	0.0	0.	0.	0.0	0.0
13	3.9	9.3	24.5	0.0	0.0	0.0	0.	0.	0.0	3.5
14	4.0	9.3	41.0	0.0	0.0	0.0	0.	0.	0.0	3.5
15	4.0	9.4	55.0	0.0	0.0	0.0	0.	0.	0.0	5.0
16	3.9	9.3	23.0	0.0	0.0	0.0	0.	0.	0.0	4.0
17	4.0	9.3	21.5	0.0	0.0	0.0	0.	0.	0.0	3.0
18	4.0	9.3	38.0	0.0	0.0	0.0	0.	0.	0.0	3.5
19	4.1	9.4	44.5	0.0	0.0	0.0	0.	0.	0.0	7.5
20	4.0	9.3	23.5	0.0	0.0	0.0	0.	0.	0.0	2.0
MEAN	4.0	9.3	29.9	0.0	0.0	0.0	0.	0.	0.0	4.2
STD DEV	.1	.0	12.1	0.0	0.0	0.0	0.	0.	0.0	1.9

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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  ARTEMISIA TRIDENTATA    STUDY AREA DEMER                   DATE 10  JULY     1982
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   PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
   NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE     BRANCH  VEG.  SEED
           VEG. REPR.                              CLASS   PERCENT TWIG  STALK
                                                                   LNGTH LNGTH
*******************************************************************************
     1     4.1   9.4    0.0    0.0    0.0    0.0   0.        0.     .8   3.0
     2     4.2   9.4    0.0    0.0    0.0    0.0   0.        0.     .8   1.0
     3     4.1   0.0    0.0    0.0    0.0    0.0   0.        0.     .8   0.0
     4     4.2   9.4    0.0    0.0    0.0    0.0   0.        0.     .8   3.5
     5     3.9   0.0    0.0    0.0    0.0    0.0   0.        0.     .4   0.0
     6     4.1   9.5    0.0    0.0    0.0    0.0   0.        0.     .8   4.0
     7     3.9   0.0    0.0    0.0    0.0    0.0   0.        0.     .4   0.0
     8     4.0   9.2    0.0    0.0    0.0    0.0   0.        0.     .7   4.0
     9     4.0   9.4    0.0    0.0    0.0    0.0   0.        0.     .8   7.0
    10     4.0   9.2    0.0    0.0    0.0    0.0   0.        0.     .7   1.5
    11     4.0   9.5    0.0    0.0    0.0    0.0   0.        0.     .7   4.5
    12     3.9   0.0    0.0    0.0    0.0    0.0   0.        0.     .4   0.0
    13     4.0   0.0    0.0    0.0    0.0    0.0   0.        0.     .7   0.0
    14     3.9   9.2    0.0    0.0    0.0    0.0   0.        0.     .4   4.0
    15     3.9   9.5    0.0    0.0    0.0    0.0   0.        0.     .4   3.5
    16     3.9   0.0    0.0    0.0    0.0    0.0   0.        0.     .5   0.0
    17     4.0   9.4    0.0    0.0    0.0    0.0   0.        0.     .5   3.0
    18     4.2   9.4    0.0    0.0    0.0    0.0   0.        0.     .8   3.0
    19     4.0   9.5    0.0    0.0    0.0    0.0   0.        0.     .9   5.0
    20     3.9   9.0    0.0    0.0    0.0    0.0   0.        0.     .4   1.5

     MEAN  4.0   9.4    0.0    0.0    0.0    0.0   0.        0.     .6   3.5

  STD DEV   .1    .2    0.0    0.0    0.0    0.0   0.        0.     .2   1.5

   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA DEMER               DATE 25  JULY      1982
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 PLANT  PHENOLOGICAL   PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.    STAGE  SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE     BRANCH  VEG.  SEED
         VEG.  REPR.                               CLASS   PERCENT TWIG  STALK
                                                                   LNGTH LNGTH
*******************************************************************************
    1     4.1   9.4    30.5    0.0    0.0    0.0   0.        0.    1.0   4.5
    2     4.1   9.5    31.0    0.0    0.0    0.0   0.        0.     .5   3.0
    3     4.1   0.0    18.0    0.0    0.0    0.0   0.        0.     .5   0.0
    4     4.0   9.5    16.0    0.0    0.0    0.0   0.        0.    0.0   4.0
    5     4.0   0.0    24.0    0.0    0.0    0.0   0.        0.    0.0   0.0
    6     4.1   9.5    22.5    0.0    0.0    0.0   0.        0.     .5   5.5
    7     4.0   0.0     6.5    0.0    0.0    0.0   0.        0.    0.0   0.0
    8     4.2   9.5    24.0    0.0    0.0    0.0   0.        0.    1.5   4.0
    9     4.2   9.5    38.0    0.0    0.0    0.0   0.        0.    1.0   5.0
   10     4.2   0.0    42.0    0.0    0.0    0.0   0.        0.    1.0   0.0
   11     4.2   0.0    46.0    0.0    0.0    0.0   0.        0.    1.5   6.5
   12     4.1   0.0    27.0    0.0    0.0    0.0   0.        0.    0.0   0.0
   13     4.2   0.0    27.0    0.0    0.0    0.0   0.        0.    2.0   0.0
   14     4.2   9.5    42.0    0.0    0.0    0.0   0.        0.    1.5   5.0
   15     4.2   9.5    55.5    0.0    0.0    0.0   0.        0.    1.5   6.0
   16     4.2   9.5    22.0    0.0    0.0    0.0   0.        0.    1.5   4.5
   17     4.1   0.0    22.0    0.0    0.0    0.0   0.        0.    1.0   0.0
   18     4.2   9.5    30.0    0.0    0.0    0.0   0.        0.    1.5   6.5
   19     4.0   0.0    16.5    0.0    0.0    0.0   0.        0.    0.0   0.0
   20     4.0   0.0    25.0    0.0    0.0    0.0   0.        0.    0.0   0.0


     MEAN 4.1   9.5    28.3    0.0    0.0    0.0   0.        0.    1.2   5.0

  STD DEV  .1    .0    11.6    0.0    0.0    0.0   0.        0.     .5   1.1

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA DEMER                  DATE 09  AUGUST   1982
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 PLANT PHENOLOGICAL  PLANT   PLANT   PLANT   PLANT   PLANT   DEAD     NEW   NEW
 NO.   STAGE SCORE   HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH   VEG.  SEED
        VEG.  REPR.                                  CLASS   PERCENT  TWIG  STALK
                                                                      LNGTH LNGTH
*****************************************************************************
     1   4.4   9.8    0.0     0.0     0.0     0.0    0.       0.       .5   5.0
     2   4.4   9.6    0.0     0.0     0.0     0.0    0.       0.       .5   2.0
     3   4.5   0.0    0.0     0.0     0.0     0.0    0.       0.       .8   0.0
     4   4.5   9.7    0.0     0.0     0.0     0.0    0.       0.       .8   3.5
     5   4.3   0.0    0.0     0.0     0.0     0.0    0.       0.       .3   0.0
     6   4.5   9.7    0.0     0.0     0.0     0.0    0.       0.       .8   4.0
     7   4.4   9.8    0.0     0.0     0.0     0.0    0.       0.       .6   3.0
     8   3.9   0.0    0.0     0.0     0.0     0.0    0.       0.      1.0   7.0
     9   4.6   9.8    0.0     0.0     0.0     0.0    0.       0.      0.0   0.0
    10   4.5   0.0    0.0     0.0     0.0     0.0    0.       0.       .9   0.0
    11   4.5   9.8    0.0     0.0     0.0     0.0    0.       0.       .9   4.0
    12   4.4   0.0    0.0     0.0     0.0     0.0    0.       0.       .6   0.0
    13   4.6   0.0    0.0     0.0     0.0     0.0    0.       0.      1.8   0.0
    14   4.4   9.7    0.0     0.0     0.0     0.0    0.       0.       .5   5.0
    15   4.5   9.8    0.0     0.0     0.0     0.0    0.       0.       .7   4.0
    16   4.5   9.7    0.0     0.0     0.0     0.0    0.       0.       .9   5.0
    17   4.5   9.7    0.0     0.0     0.0     0.0    0.       0.       .9   3.5
    18   4.6   9.6    0.0     0.0     0.0     0.0    0.       0.      1.0   4.0
    19   4.4   0.0    0.0     0.0     0.0     0.0    0.       0.       .5   0.0
    20   4.0   9.8    0.0     0.0     0.0     0.0    0.       0.       .2   2.0


  MEAN   4.4   9.7    0.0     0.0     0.0     0.0    0.       0.       .7   4.0

STD DEV   .2    .1    0.0     0.0     0.0     0.0    0.       0.       .3   1.3

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA STUDY AREA DEMER DATE 18 SEPT 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	5.0	10.1	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
2	5.0	10.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
3	5.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
4	5.1	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
5	5.0	10.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
6	5.1	10.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
7	5.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
8	5.1	10.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
9	5.1	10.1	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
10	5.2	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
11	5.1	10.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
12	5.1	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
13	5.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
14	5.0	10.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
15	5.1	10.1	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
16	5.2	10.2	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
17	5.1	10.1	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
18	5.1	10.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
19	5.1	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
20	5.0	10.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
MEAN	5.1	10.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
STD DEV	.1	.1	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA STUDY AREA FARSON DATE 30 APRIL 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	2.6	0.0	21.2	0.0	0.0	0.0	0.	0.	0.0	0.0
2	2.4	0.0	11.0	0.0	0.0	0.0	0.	0.	0.0	0.0
3	2.5	0.0	33.0	0.0	0.0	0.0	0.	0.	0.0	0.0
4	2.1	0.0	16.0	0.0	0.0	0.0	0.	0.	0.0	0.0
5	2.2	0.0	36.0	0.0	0.0	0.0	0.	0.	0.0	0.0
6	2.1	0.0	30.0	0.0	0.0	0.0	0.	0.	0.0	0.0
7	2.5	0.0	10.0	0.0	0.0	0.0	0.	0.	0.0	0.0
8	2.1	0.0	30.0	0.0	0.0	0.0	0.	0.	0.0	0.0
9	2.1	0.0	18.0	0.0	0.0	0.0	0.	0.	0.0	0.0
10	2.3	0.0	19.0	0.0	0.0	0.0	0.	0.	0.0	0.0
11	2.2	0.0	36.0	0.0	0.0	0.0	0.	0.	0.0	0.0
12	2.4	0.0	29.0	0.0	0.0	0.0	0.	0.	0.0	0.0
13	2.5	0.0	26.0	0.0	0.0	0.0	0.	0.	0.0	0.0
14	2.2	0.0	22.0	0.0	0.0	0.0	0.	0.	0.0	0.0
15	2.3	0.0	21.0	0.0	0.0	0.0	0.	0.	0.0	0.0
16	2.6	0.0	18.0	0.0	0.0	0.0	0.	0.	0.0	0.0
17	2.4	0.0	31.0	0.0	0.0	0.0	0.	0.	0.0	0.0
18	2.5	0.0	18.0	0.0	0.0	0.0	0.	0.	0.0	0.0
19	2.4	0.0	33.0	0.0	0.0	0.0	0.	0.	0.0	0.0
20	2.2	0.0	13.0	0.0	0.0	0.0	0.	0.	0.0	0.0
MEAN	2.3	0.0	23.6	0.0	0.0	0.0	0.	0.	0.0	0.0
STD DEV	.2	0.0	8.3	0.0	0.0	0.0	0.	0.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMISIA TRIDENTATA   STUDY AREA FARSON              DATE 19  MAY       1982
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 PLANT PHENOLOGICAL   PLANT  PLANT  PLANT  PLANT  PLANT   DEAD     NEW   NEW
 NO.   STAGE SCORE    HGHT   LNGTH  WIDTH  DIAM   AGE     BRANCH   VEG.  SEED
        VEG.  REPR.                               CLASS   PERCENT  TWIG  STALK
                                                                   LNGTH LNGTH
**************************************************************************************
   1     3.2   0.0    20.0   43.0   36.0    0.0   0.       0.      0.0   0.0
   2     3.2   0.0    10.0   31.0   27.0    0.0   0.       0.      0.0   0.0
   3     3.2   0.0    29.0   82.0   59.0    0.0   0.       0.      0.0   0.0
   4     3.3   0.0    19.0   23.0   13.0    0.0   0.       0.      0.0   0.0
   5     3.2   0.0    28.0   57.0   29.0    0.0   0.       0.      0.0   0.0
   6     3.2   0.0    28.0   19.0   21.0    0.0   0.       0.      0.0   0.0
   7     3.2   0.0    12.0   33.0   13.0    0.0   0.       0.      0.0   0.0
   8     3.3   0.0    36.0   59.0   23.0    0.0   0.       0.      0.0   0.0
   9     3.2   0.0    18.0   44.0   19.0    0.0   0.       0.      0.0   0.0
  10     3.2   0.0    18.0   23.0   24.0    0.0   0.       0.      0.0   0.0
  11     3.2   0.0    34.0   73.0   32.0    0.0   0.       0.      0.0   0.0
  12     3.3   0.0    27.0   51.0   69.0    0.0   0.       0.      0.0   0.0
  13     3.3   0.0    22.0   58.0   25.0    0.0   0.       0.      0.0   0.0
  14     3.3   0.0    21.0   41.0   24.0    0.0   0.       0.      0.0   0.0
  15     3.2   0.0    23.0   26.0   16.0    0.0   0.       0.      0.0   0.0
  16     3.2   0.0    19.0   26.0   17.0    0.0   0.       0.      0.0   0.0
  17     3.2   0.0    16.0   13.0   10.0    0.0   0.       0.      0.0   0.0
  18     3.3   0.0    13.0   28.0   21.0    0.0   0.       0.      0.0   0.0
  19     3.3   0.0    22.0   20.0   12.0    0.0   0.       0.      0.0   0.0
  20     3.2   0.0    12.0   30.0   21.0    0.0   0.       0.      0.0   0.0


   MEAN  3.2   0.0    21.4   39.0   25.6    0.0   0.       0.      0.0   0.0

 STD DEV  .0   0.0     7.2   19.0   14.9    0.0   0.       0.      0.0   0.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
  ARTEMISIA TRIDENTATA   STUDY AREA FARSON              DATE 03  JUNE      1982
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   PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
   NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE     BRANCH  VEG.  SEED
          VEG.  REPR.                              CLASS   PERCENT TWIG  STALK
                                                                   LNGTH LNGTH
*****************************************************************************
      1    3.3   0.0   23.0    0.0    0.0    0.0   0.       0.      .4   0.0
      2    3.3   0.0   13.0    0.0    0.0    0.0   0.       0.      .3   0.0
      3    3.3   0.0   32.0    0.0    0.0    0.0   0.       0.      .2   0.0
      4    3.3   0.0   22.0    0.0    0.0    0.0   0.       0.      .3   0.0
      5    3.3   0.0   37.0    0.0    0.0    0.0   0.       0.      .2   0.0
      6    3.3   0.0   30.0    0.0    0.0    0.0   0.       0.      .2   0.0
      7    3.3   0.0   14.0    0.0    0.0    0.0   0.       0.      .2   0.0
      8    3.3   0.0   33.0    0.0    0.0    0.0   0.       0.      .2   0.0
      9    3.3   0.0   20.5    0.0    0.0    0.0   0.       0.      .2   0.0
     10    3.3   0.0   23.0    0.0    0.0    0.0   0.       0.      .1   0.0
     11    3.3   0.0   36.0    0.0    0.0    0.0   0.       0.      .3   0.0
     12    3.3   0.0   37.0    0.0    0.0    0.0   0.       0.      .4   0.0
     13    3.3   0.0   24.0    0.0    0.0    0.0   0.       0.      .4   0.0
     14    3.3   0.0   22.0    0.0    0.0    0.0   0.       0.     0.0   0.0
     15    3.3   0.0   28.5    0.0    0.0    0.0   0.       0.      .4   0.0
     16    3.3   0.0   18.0    0.0    0.0    0.0   0.       0.      .3   0.0
     17    3.3   0.0   27.5    0.0    0.0    0.0   0.       0.      .4   0.0
     18    3.3   0.0   22.0    0.0    0.0    0.0   0.       0.      .1   0.0
     19    3.3   0.0   23.0    0.0    0.0    0.0   0.       0.     0.0   0.0
     20    3.3   0.0   15.0    0.0    0.0    0.0   0.       0.      .1   0.0


     MEAN  3.3   0.0   25.0    0.0    0.0    0.0   0.       0.      .3   0.0

  STD DEV   .0   0.0    7.4    0.0    0.0    0.0   0.       0.      .1   0.0

   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA FARSON   DATE 15 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.4	9.1	0.0	0.0	0.0	0.0	0.	0.	0.0	2.0
2	3.5	9.0	0.0	0.0	0.0	0.0	0.	0.	0.0	2.0
3	3.5	9.1	0.0	0.0	0.0	0.0	0.	0.	0.0	2.5
4	3.4	9.0	0.0	0.0	0.0	0.0	0.	0.	0.0	.5
5	3.5	9.1	0.0	0.0	0.0	0.0	0.	0.	0.0	2.5
6	3.4	9.0	0.0	0.0	0.0	0.0	0.	0.	0.0	.5
7	3.4	9.0	0.0	0.0	0.0	0.0	0.	0.	0.0	.5
8	3.4	9.1	0.0	0.0	0.0	0.0	0.	0.	0.0	.5
9	3.4	9.1	0.0	0.0	0.0	0.0	0.	0.	0.0	.5
10	3.4	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
11	3.5	9.0	0.0	0.0	0.0	0.0	0.	0.	0.0	.5
12	3.4	9.0	0.0	0.0	0.0	0.0	0.	0.	0.0	1.0
13	3.4	9.0	0.0	0.0	0.0	0.0	0.	0.	0.0	.5
14	3.4	9.0	0.0	0.0	0.0	0.0	0.	0.	0.0	.5
15	3.5	9.1	0.0	0.0	0.0	0.0	0.	0.	0.0	.5
16	3.4	9.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
17	3.4	9.0	0.0	0.0	0.0	0.0	0.	0.	0.0	.5
18	3.4	9.0	0.0	0.0	0.0	0.0	0.	0.	0.0	.5
19	3.4	9.1	0.0	0.0	0.0	0.0	0.	0.	0.0	1.0
20	3.4	9.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
MEAN	3.4	9.0	0.0	0.0	0.0	0.0	0.	0.	0.0	1.0
STD DEV	.0	.0	0.0	0.0	0.0	0.0	0.	0.	0.0	.8

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA   STUDY AREA FARSON   DATE 30 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.5	0.0	0.0	0.0	0.0	0.0	0.	0.	.4	0.0
2	3.5	0.0	0.0	0.0	0.0	0.0	0.	0.	.4	0.0
3	3.5	9.5	0.0	0.0	0.0	0.0	0.	0.	.4	2.0
4	3.5	0.0	0.0	0.0	0.0	0.0	0.	0.	.4	0.0
5	3.6	9.5	0.0	0.0	0.0	0.0	0.	0.	.5	2.0
6	3.5	9.2	0.0	0.0	0.0	0.0	0.	0.	.3	.8
7	3.5	0.0	0.0	0.0	0.0	0.0	0.	0.	.3	0.0
8	3.4	0.0	0.0	0.0	0.0	0.0	0.	0.	.4	0.0
9	3.5	0.0	0.0	0.0	0.0	0.0	0.	0.	.5	0.0
10	3.5	0.0	0.0	0.0	0.0	0.0	0.	0.	.3	0.0
11	3.4	0.0	0.0	0.0	0.0	0.0	0.	0.	.4	0.0
12	3.5	9.0	0.0	0.0	0.0	0.0	0.	0.	.5	.8
13	3.4	9.0	0.0	0.0	0.0	0.0	0.	0.	.4	.8
14	3.5	0.0	0.0	0.0	0.0	0.0	0.	0.	.3	0.0
15	3.4	9.1	0.0	0.0	0.0	0.0	0.	0.	.4	1.0
16	3.4	0.0	0.0	0.0	0.0	0.0	0.	0.	.4	0.0
17	3.5	0.0	0.0	0.0	0.0	0.0	0.	0.	.3	0.0
18	3.5	0.0	0.0	0.0	0.0	0.0	0.	0.	.3	0.0
19	3.5	0.0	0.0	0.0	0.0	0.0	0.	0.	.3	0.0
20	3.5	0.0	0.0	0.0	0.0	0.0	0.	0.	.3	0.0
MEAN	3.5	9.2	0.0	0.0	0.0	0.0	0.	0.	.4	1.2
STD DEV	.1	.2	0.0	0.0	0.0	0.0	0.	0.	.1	.6

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA STUDY AREA FARSON DATE 10 JULY 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.6	0.0	0.0	0.0	0.0	0.0	0.	0.	.4	0.0
2	3.6	0.0	0.0	0.0	0.0	0.0	0.	0.	.2	4.0
3	3.5	9.5	0.0	0.0	0.0	0.0	0.	0.	.3	0.0
4	3.6	0.0	0.0	0.0	0.0	0.0	0.	0.	.3	0.0
5	3.7	9.5	0.0	0.0	0.0	0.0	0.	0.	.4	2.0
6	3.6	0.0	0.0	0.0	0.0	0.0	0.	0.	.4	0.0
7	3.7	0.0	0.0	0.0	0.0	0.0	0.	0.	.2	0.0
8	3.7	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
9	3.7	0.0	0.0	0.0	0.0	0.0	0.	0.	.3	0.0
10	3.7	0.0	0.0	0.0	0.0	0.0	0.	0.	.3	0.0
11	3.6	9.5	0.0	0.0	0.0	0.0	0.	0.	.4	3.0
12	3.7	0.0	0.0	0.0	0.0	0.0	0.	0.	.4	0.0
13	3.7	0.0	0.0	0.0	0.0	0.0	0.	0.	.3	0.0
14	3.6	9.5	0.0	0.0	0.0	0.0	0.	0.	.3	1.5
15	3.7	0.0	0.0	0.0	0.0	0.0	0.	0.	.4	0.0
16	3.7	0.0	0.0	0.0	0.0	0.0	0.	0.	.3	0.0
17	3.7	9.5	0.0	0.0	0.0	0.0	0.	0.	.3	.5
18	3.7	0.0	0.0	0.0	0.0	0.0	0.	0.	.3	0.0
19	3.6	9.5	0.0	0.0	0.0	0.0	0.	0.	.3	4.0
20	3.6	0.0	0.0	0.0	0.0	0.0	0.	0.	.2	0.0
MEAN	3.6	9.5	0.0	0.0	0.0	0.0	0.	0.	.3	2.5
STD DEV	.1	0.0	0.0	0.0	0.0	0.0	0.	0.	.1	1.4

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA   STUDY AREA FARSON   DATE 28 JULY 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.2	9.6	21.0	0.0	0.0	0.0	0.	0.	.3	2.0
2	4.2	0.0	13.0	0.0	0.0	0.0	0.	0.	.3	0.0
3	4.3	9.6	32.0	0.0	0.0	0.0	0.	0.	.3	3.5
4	4.3	0.0	19.0	0.0	0.0	0.0	0.	0.	.4	0.0
5	4.3	9.6	35.0	0.0	0.0	0.0	0.	0.	.3	3.0
6	3.9	9.6	26.0	0.0	0.0	0.0	0.	0.	0.0	5.0
7	4.0	0.0	13.0	0.0	0.0	0.0	0.	0.	.2	0.0
8	4.2	0.0	34.0	0.0	0.0	0.0	0.	0.	.3	0.0
9	4.3	0.0	21.0	0.0	0.0	0.0	0.	0.	.5	0.0
10	4.0	0.0	17.0	0.0	0.0	0.0	0.	0.	.2	0.0
11	4.2	9.6	35.0	0.0	0.0	0.0	0.	0.	.3	2.0
12	4.2	9.6	33.0	0.0	0.0	0.0	0.	0.	.2	.5
13	4.2	9.6	25.0	0.0	0.0	0.0	0.	0.	.3	.5
14	3.9	0.0	22.5	0.0	0.0	0.0	0.	0.	0.0	0.0
15	4.2	9.4	21.0	0.0	0.0	0.0	0.	0.	.3	1.0
16	4.2	0.0	14.0	0.0	0.0	0.0	0.	0.	.3	0.0
17	4.3	9.6	29.0	0.0	0.0	0.0	0.	0.	.5	.5
18	4.2	0.0	20.0	0.0	0.0	0.0	0.	0.	.3	0.0
19	3.9	0.0	25.0	0.0	0.0	0.0	0.	0.	.3	0.0
20	3.9	0.0	12.0	0.0	0.0	0.0	0.	0.	0.0	0.0
MEAN	4.1	9.6	23.4	0.0	0.0	0.0	0.	0.	.3	2.0
STD DEV	.2	.1	7.7	0.0	0.0	0.0	0.	0.	.1	1.6

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA   STUDY AREA FARSON   DATE 09 AUGUST 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.7	0.0	0.0	0.0	0.0	0.0	0.	0.	.5	0.0
2	4.7	0.0	0.0	0.0	0.0	0.0	0.	0.	.2	0.0
3	4.7	0.0	0.0	0.0	0.0	0.0	0.	0.	.2	0.0
4	4.7	0.0	0.0	0.0	0.0	0.0	0.	0.	.3	0.0
5	4.7	9.7	0.0	0.0	0.0	0.0	0.	0.	.3	2.0
6	4.7	0.0	0.0	0.0	0.0	0.0	0.	0.	.3	0.0
7	4.9	0.0	0.0	0.0	0.0	0.0	0.	0.	.2	0.0
8	4.7	0.0	0.0	0.0	0.0	0.0	0.	0.	.2	0.0
9	4.7	0.0	0.0	0.0	0.0	0.0	0.	0.	.2	0.0
10	4.7	0.0	0.0	0.0	0.0	0.0	0.	0.	.2	0.0
11	4.7	9.6	0.0	0.0	0.0	0.0	0.	0.	.2	3.0
12	4.7	9.7	0.0	0.0	0.0	0.0	0.	0.	.3	1.0
13	4.7	9.6	0.0	0.0	0.0	0.0	0.	0.	.2	.5
14	4.7	9.7	0.0	0.0	0.0	0.0	0.	0.	.3	1.0
15	4.7	9.7	0.0	0.0	0.0	0.0	0.	0.	.3	1.0
16	4.8	0.0	0.0	0.0	0.0	0.0	0.	0.	.3	0.0
17	4.8	9.7	0.0	0.0	0.0	0.0	0.	0.	.3	0.0
18	4.8	0.0	0.0	0.0	0.0	0.0	0.	0.	.2	1.0
19	4.8	9.7	0.0	0.0	0.0	0.0	0.	0.	.2	0.0
20	4.7	0.0	0.0	0.0	0.0	0.0	0.	0.	.3	5.0
MEAN	4.7	9.7	0.0	0.0	0.0	0.0	0.	0.	.3	1.8
STD DEV	.1	.0	0.0	0.0	0.0	0.0	0.	0.	.1	1.5

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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  ARTEMISIA TRIDENTATA    STUDY AREA FARSON                DATE 11  SEPT      1982
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   PLANT  PHENOLOGICAL   PLANT   PLANT   PLANT   PLANT   PLANT    DEAD     NEW   NEW
   NO.    STAGE SCORE    HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH    VEG.  SEED
           VEG.  REPR.                                   CLASS   PERCENT   TWIG  STALK
                                                                           LNGTH LNGTH
*************************************************************************************
     1      4.8  10.0     0.0     0.0     0.0     0.0     0.        0.       .3   3.0
     2      4.6   0.0     0.0     0.0     0.0     0.0     0.        0.       .4   0.0
     3      4.6  10.0     0.0     0.0     0.0     0.0     0.        0.       .6   3.0
     4      4.6   0.0     0.0     0.0     0.0     0.0     0.        0.       .4   0.0
     5      4.6  10.2     0.0     0.0     0.0     0.0     0.        0.       .3   3.0
     6      5.0   0.0     0.0     0.0     0.0     0.0     0.        0.       .1   0.0
     7      5.0   0.0     0.0     0.0     0.0     0.0     0.        0.       .2   0.0
     8      5.0   0.0     0.0     0.0     0.0     0.0     0.        0.       .2   0.0
     9      4.6   0.0     0.0     0.0     0.0     0.0     0.        0.       .3   0.0
    10      5.0   0.0     0.0     0.0     0.0     0.0     0.        0.       .1   0.0
    11      5.0  10.0     0.0     0.0     0.0     0.0     0.        0.       .2   2.0
    12      4.6   9.9     0.0     0.0     0.0     0.0     0.        0.       .3   2.0
    13      4.8   9.9     0.0     0.0     0.0     0.0     0.        0.       .2   1.5
    14      4.6   9.9     0.0     0.0     0.0     0.0     0.        0.       .4   1.0
    15      5.0   9.9     0.0     0.0     0.0     0.0     0.        0.       .2   2.0
    16      4.6   0.0     0.0     0.0     0.0     0.0     0.        0.       .4   0.0
    17      4.6  10.1     0.0     0.0     0.0     0.0     0.        0.       .6   2.0
    18      4.8   0.0     0.0     0.0     0.0     0.0     0.        0.       .2   0.0
    19      5.0   0.0     0.0     0.0     0.0     0.0     0.        0.       .2   0.0
    20      5.0   0.0     0.0     0.0     0.0     0.0     0.        0.       .1   0.0


    MEAN    4.8  10.0     0.0     0.0     0.0     0.0     0.        0.       .3   2.2

  STD DEV    .2    .1     0.0     0.0     0.0     0.0     0.        0.       .1    .7

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA STUDY AREA HORSE CRK DATE 30 APRIL 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE		PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
	VEG.	REPR.								
1	3.3	0.0	30.0	0.0	0.0	0.0	0.	0.	0.0	0.0
2	3.3	0.0	34.0	0.0	0.0	0.0	0.	0.	0.0	0.0
3	3.2	0.0	45.0	0.0	0.0	0.0	0.	0.	0.0	0.0
4	3.3	0.0	71.0	0.0	0.0	0.0	0.	0.	0.0	0.0
5	3.2	0.0	11.0	0.0	0.0	0.0	0.	0.	0.0	0.0
6	3.3	0.0	19.0	0.0	0.0	0.0	0.	0.	0.0	0.0
7	3.3	0.0	58.0	0.0	0.0	0.0	0.	0.	0.0	0.0
8	3.3	0.0	42.0	0.0	0.0	0.0	0.	0.	0.0	0.0
9	3.1	0.0	23.0	0.0	0.0	0.0	0.	0.	0.0	0.0
10	3.4	0.0	36.0	0.0	0.0	0.0	0.	0.	0.0	0.0
11	3.3	0.0	25.0	0.0	0.0	0.0	0.	0.	0.0	0.0
12	3.3	0.0	15.5	0.0	0.0	0.0	0.	0.	0.0	0.0
13	3.4	0.0	36.0	0.0	0.0	0.0	0.	0.	0.0	0.0
14	3.4	0.0	31.5	0.0	0.0	0.0	0.	0.	0.0	0.0
15	3.3	0.0	33.5	0.0	0.0	0.0	0.	0.	0.0	0.0
16	3.2	0.0	17.0	0.0	0.0	0.0	0.	0.	0.0	0.0
17	3.2	0.0	43.0	0.0	0.0	0.0	0.	0.	0.0	0.0
18	3.2	0.0	25.0	0.0	0.0	0.0	0.	0.	0.0	0.0
19	3.0	0.0	18.5	0.0	0.0	0.0	0.	0.	0.0	0.0
20	3.0	0.0	12.5	0.0	0.0	0.0	0.	0.	0.0	0.0
MEAN	3.3	0.0	31.3	0.0	0.0	0.0	0.	0.	0.0	0.0
STD DEV	.1	0.0	15.3	0.0	0.0	0.0	0.	0.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMISIA TRIDENTATA   STUDY AREA HORSE CRK          DATE 18  MAY       1982
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  PLANT PHENOLOGICAL   PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
  NO.   STAGE SCORE    HGHT   LNGTH  WIDTH  DIAM   AGE     BRANCH  VEG.  SEED
          VEG.  REPR.                              CLASS   PERCENT TWIG  STALK
                                                                  LNGTH LNGTH
*****************************************************************************
    1     3.3   0.0    29.0   65.0   28.0   0.0    0.        0.    0.0   0.0
    2     3.4   0.0    36.0   82.0   21.0   0.0    0.        0.    0.0   0.0
    3     3.4   0.0    45.0   69.0   44.0   0.0    0.        0.    0.0   0.0
    4     3.4   0.0    66.0   80.0   42.0   0.0    0.        0.    0.0   0.0
    5     3.4   0.0     8.0   24.0   11.0   0.0    0.        0.    0.0   0.0
    6     3.3   0.0    16.5   25.0   17.0   0.0    0.        0.    0.0   0.0
    7     3.4   0.0    57.0   75.0   23.0   0.0    0.        0.    0.0   0.0
    8     3.4   0.0    36.0   44.0   42.0   0.0    0.        0.    0.0   0.0
    9     3.3   0.0    33.0   34.0   21.0   0.0    0.        0.    0.0   0.0
   10     3.3   0.0    21.0   30.0   13.0   0.0    0.        0.    0.0   0.0
   11     3.3   0.0    25.0   37.0   15.0   0.0    0.        0.    0.0   0.0
   12     3.3   0.0    23.0   47.0   22.0   0.0    0.        0.    0.0   0.0
   13     3.4   0.0    35.0   51.0   34.0   0.0    0.        0.    0.0   0.0
   14     3.3   0.0    27.0   40.0   16.0   0.0    0.        0.    0.0   0.0
   15     3.4   0.0    33.0   40.0   18.0   0.0    0.        0.    0.0   0.0
   16     3.3   0.0    23.0   39.0   14.0   0.0    0.        0.    0.0   0.0
   17     3.3   0.0    43.0   40.0   24.0   0.0    0.        0.    0.0   0.0
   18     3.3   0.0    27.0   23.0   10.0   0.0    0.        0.    0.0   0.0
   19     3.3   0.0    19.0   66.0   20.0   0.0    0.        0.    0.0   0.0
   20     3.3   0.0    12.0   15.0   10.0   0.0    0.        0.    0.0   0.0


     MEAN 3.3   0.0    30.7   46.3   22.3   0.0    0.        0.    0.0   0.0

  STD DEV  .1   0.0    14.2   20.1   10.6   0.0    0.        0.    0.0   0.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA HORSE CRK          DATE 02  JUNE      1982
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
         VEG.  REPR.                             CLASS  PERCENT  TWIG  STALK
                                                                 LNGTH LNGTH
**********************************************************************************
   1     3.7   9.1   25.0    0.0    0.0    0.0   0.       0.     0.0   4.0
   2     3.6   9.1   34.0    0.0    0.0    0.0   0.       0.     0.0   2.0
   3     3.6   9.1   44.0    0.0    0.0    0.0   0.       0.     0.0   3.5
   4     3.6   9.2   67.0    0.0    0.0    0.0   0.       0.     0.0  10.0
   5     3.6   9.0    8.5    0.0    0.0    0.0   0.       0.     0.0   0.0
   6     3.6   9.0   16.5    0.0    0.0    0.0   0.       0.     0.0   0.0
   7     3.6   9.2   60.0    0.0    0.0    0.0   0.       0.     0.0   5.0
   8     3.5   9.1   49.0    0.0    0.0    0.0   0.       0.     0.0   3.0
   9     3.6   9.2   24.0    0.0    0.0    0.0   0.       0.     0.0   7.0
  10     3.6   9.2   26.0    0.0    0.0    0.0   0.       0.     0.0   7.5
  11     3.7   9.2   24.0    0.0    0.0    0.0   0.       0.     0.0   7.0
  12     3.6   9.0   19.0    0.0    0.0    0.0   0.       0.     0.0   0.0
  13     3.6   9.1   33.0    0.0    0.0    0.0   0.       0.     0.0   4.0
  14     3.6   9.1   25.0    0.0    0.0    0.0   0.       0.     0.0   3.0
  15     3.6   9.1   33.5    0.0    0.0    0.0   0.       0.     0.0   0.0
  16     3.6   9.1   24.0    0.0    0.0    0.0   0.       0.     0.0   3.5
  17     3.6   9.1   40.0    0.0    0.0    0.0   0.       0.     0.0   2.0
  18     3.5   0.0   23.0    0.0    0.0    0.0   0.       0.     0.0   0.0
  19     3.6   9.1   19.0    0.0    0.0    0.0   0.       0.     0.0   2.0
  20     3.6   9.1   14.0    0.0    0.0    0.0   0.       0.     0.0   2.5


   MEAN  3.6   9.1   30.4    0.0    0.0    0.0   0.       0.     0.0   4.4

 STD DEV  .0    .1   15.1    0.0    0.0    0.0   0.       0.     0.0   2.4

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA HORSE CRK          DATE 29  JUNE      1982
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
        VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                 LNGTH LNGTH
*****************************************************************************
    1    4.1   9.4    32.0    0.0    0.0    0.0   0.       0.     0.0  13.0
    2    4.1   9.4    42.0    0.0    0.0    0.0   0.       0.     0.0  10.0
    3    4.1   9.4    49.0    0.0    0.0    0.0   0.       0.     0.0  11.0
    4    4.1   9.4    75.0    0.0    0.0    0.0   0.       0.     0.0  17.0
    5    4.0   0.0     6.0    0.0    0.0    0.0   0.       0.     0.0   0.0
    6    4.2   0.0    12.0    0.0    0.0    0.0   0.       0.     0.0   0.0
    7    4.1   9.4    65.0    0.0    0.0    0.0   0.       0.     0.0  12.0
    8    4.2   9.4    41.0    0.0    0.0    0.0   0.       0.     0.0   5.0
    9    4.1   9.3    15.0    0.0    0.0    0.0   0.       0.     0.0   5.0
   10    4.2   9.4    30.0    0.0    0.0    0.0   0.       0.     0.0  16.0
   11    4.2   9.5    39.0    0.0    0.0    0.0   0.       0.     0.0  19.0
   12    4.2   0.0    19.0    0.0    0.0    0.0   0.       0.     0.0   0.0
   13    4.1   9.4    35.0    0.0    0.0    0.0   0.       0.     0.0   9.0
   14    4.2   0.0    26.0    0.0    0.0    0.0   0.       0.     0.0   0.0
   15    4.2   0.0    33.0    0.0    0.0    0.0   0.       0.     0.0   0.0
   16    4.1   9.4    26.5    0.0    0.0    0.0   0.       0.     0.0   5.0
   17    4.2   0.0    40.0    0.0    0.0    0.0   0.       0.     0.0   0.0
   18    4.1   0.0    23.0    0.0    0.0    0.0   0.       0.     0.0   0.0
   19    4.1   9.4    24.0    0.0    0.0    0.0   0.       0.     0.0   7.5
   20    4.2   9.4    18.0    0.0    0.0    0.0   0.       0.     0.0   9.5


  MEAN   4.1   9.4    32.5    0.0    0.0    0.0   0.       0.     0.0  10.7

STD DEV   .1    .0    17.0    0.0    0.0    0.0   0.       0.     0.0   4.6

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA STUDY AREA HORSE CRK DATE 9 JULY 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.3	9.5	0.0	0.0	0.0	0.0	0.	0.	2.5	14.0
2	4.4	9.5	0.0	0.0	0.0	0.0	0.	0.	2.0	12.0
3	4.4	9.5	0.0	0.0	0.0	0.0	0.	0.	2.0	10.0
4	4.8	9.6	0.0	0.0	0.0	0.0	0.	0.	5.0	19.0
5	4.1	0.0	0.0	0.0	0.0	0.0	0.	0.	1.5	0.0
6	4.2	9.5	0.0	0.0	0.0	0.0	0.	0.	2.0	0.0
7	4.8	9.5	0.0	0.0	0.0	0.0	0.	0.	3.0	12.0
8	4.4	9.5	0.0	0.0	0.0	0.0	0.	0.	3.0	8.0
9	4.3	9.5	0.0	0.0	0.0	0.0	0.	0.	2.5	5.0
10	4.4	9.5	0.0	0.0	0.0	0.0	0.	0.	3.3	14.0
11	4.8	9.6	0.0	0.0	0.0	0.0	0.	0.	4.0	15.0
12	4.4	0.0	0.0	0.0	0.0	0.0	0.	0.	2.9	0.0
13	4.4	9.5	0.0	0.0	0.0	0.0	0.	0.	2.7	10.0
14	4.5	0.0	0.0	0.0	0.0	0.0	0.	0.	2.5	0.0
15	4.5	0.0	0.0	0.0	0.0	0.0	0.	0.	3.0	0.0
16	4.5	9.5	0.0	0.0	0.0	0.0	0.	0.	3.0	10.0
17	4.6	0.0	0.0	0.0	0.0	0.0	0.	0.	3.0	10.0
18	4.3	0.0	0.0	0.0	0.0	0.0	0.	0.	4.0	0.0
19	4.5	9.5	0.0	0.0	0.0	0.0	0.	0.	2.0	0.0
20	4.4	9.5	0.0	0.0	0.0	0.0	0.	0.	2.3	7.0
MEAN	4.5	9.5	0.0	0.0	0.0	0.0	0.	0.	2.8	11.2
STD DEV	.2	.0	0.0	0.0	0.0	0.0	0.	0.	.8	3.7

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA   STUDY AREA HORSE CRK   DATE 26 JULY   1982

PLANT NO.	PHENOLOGICAL STAGE SCORE		PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
	VEG.	REPR.								
1	4.7	0.0	25.5	0.0	0.0	0.0	0.	0.	4.5	0.0
2	4.7	9.6	43.0	0.0	0.0	0.0	0.	0.	3.0	15.0
3	4.7	9.6	49.0	0.0	0.0	0.0	0.	0.	3.0	13.0
4	4.8	9.6	69.0	0.0	0.0	0.0	0.	0.	3.5	18.0
5	4.4	0.0	4.0	0.0	0.0	0.0	0.	0.	2.0	0.0
6	4.7	0.0	14.0	0.0	0.0	0.0	0.	0.	4.5	0.0
7	4.7	9.6	58.0	0.0	0.0	0.0	0.	0.	3.5	10.0
8	4.7	9.6	44.0	0.0	0.0	0.0	0.	0.	3.0	8.0
9	4.6	9.6	22.0	0.0	0.0	0.0	0.	0.	3.5	9.5
10	4.7	9.6	30.0	0.0	0.0	0.0	0.	0.	3.5	16.0
11	4.7	9.6	36.0	0.0	0.0	0.0	0.	0.	3.0	17.0
12	4.6	0.0	20.0	0.0	0.0	0.0	0.	0.	3.0	0.0
13	4.6	9.6	35.0	0.0	0.0	0.0	0.	0.	3.0	11.0
14	4.6	9.6	25.0	0.0	0.0	0.0	0.	0.	2.5	11.0
15	4.7	0.0	34.0	0.0	0.0	0.0	0.	0.	4.5	0.0
16	4.7	9.6	23.5	0.0	0.0	0.0	0.	0.	3.5	10.5
17	4.8	0.0	38.0	0.0	0.0	0.0	0.	0.	3.0	0.0
18	4.7	9.4	21.0	0.0	0.0	0.0	0.	0.	3.0	3.5
19	4.7	9.6	22.0	0.0	0.0	0.0	0.	0.	3.0	9.0
20	4.7	9.6	18.0	0.0	0.0	0.0	0.	0.	4.5	10.0
MEAN	4.7	9.6	31.6	0.0	0.0	0.0	0.	0.	3.4	11.5
STD DEV	.1	.1	15.6	0.0	0.0	0.0	0.	0.	.7	3.9

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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  ARTEMISIA TRIDENTATA   STUDY AREA HORSE CRK          DATE  9  AUGUST   1982
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   PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
   NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
          VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                   LNGTH LNGTH
**************************************************************************
     1    4.8   9.5    0.0    0.0    0.0    0.0    0.       0.     3.0   8.0
     2    4.8   9.8    0.0    0.0    0.0    0.0    0.       0.     4.0  12.0
     3    4.8   9.7    0.0    0.0    0.0    0.0    0.       0.     3.5   8.0
     4    4.8   9.8    0.0    0.0    0.0    0.0    0.       0.     4.0  10.0
     5    4.8   0.0    0.0    0.0    0.0    0.0    0.       0.     2.5   0.0
     6    4.5   0.0    0.0    0.0    0.0    0.0    0.       0.     2.0   0.0
     7    4.8   9.7    0.0    0.0    0.0    0.0    0.       0.     2.5   8.0
     8    4.8   9.8    0.0    0.0    0.0    0.0    0.       0.     3.5   8.0
     9    4.8   9.8    0.0    0.0    0.0    0.0    0.       0.     2.5   7.0
    10    4.8   9.8    0.0    0.0    0.0    0.0    0.       0.     3.5   8.0
    11    4.8   0.0    0.0    0.0    0.0    0.0    0.       0.     1.5   0.0
    12    4.8   0.0    0.0    0.0    0.0    0.0    0.       0.     2.5   0.0
    13    4.8   9.8    0.0    0.0    0.0    0.0    0.       0.     2.0   7.5
    14    4.8   9.5    0.0    0.0    0.0    0.0    0.       0.     2.5   9.5
    15    4.8   0.0    0.0    0.0    0.0    0.0    0.       0.     3.0   0.0
    16    4.8   9.7    0.0    0.0    0.0    0.0    0.       0.     5.0   9.5
    17    4.6   0.0    0.0    0.0    0.0    0.0    0.       0.     3.0   0.0
    18    4.5   9.5    0.0    0.0    0.0    0.0    0.       0.     1.0   4.0
    19    4.5   9.4    0.0    0.0    0.0    0.0    0.       0.     1.0   2.0
    20    4.6   9.7    0.0    0.0    0.0    0.0    0.       0.     2.5   5.5


     MEAN 4.7   9.7    0.0    0.0    0.0    0.0    0.       0.     2.8   7.6

  STD DEV  .1    .1    0.0    0.0    0.0    0.0    0.       0.     1.0   2.5

   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
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 ARTEMISIA TRIDENTATA    STUDY AREA HORSE CRK          DATE 28  AUGUST   1982
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  PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
  NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
         VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                  LNGTH LNGTH
*********************************************************************************
     1    4.9   9.8    0.0    0.0    0.0    0.0   0.       0.     1.5  10.0
     2    4.9   9.8    0.0    0.0    0.0    0.0   0.       0.     1.0  11.0
     3    4.9   9.7    0.0    0.0    0.0    0.0   0.       0.     1.0  13.0
     4    5.1   9.9    0.0    0.0    0.0    0.0   0.       0.     1.6  15.0
     5    4.7   0.0    0.0    0.0    0.0    0.0   0.       0.      .5   0.0
     6    5.0   9.8    0.0    0.0    0.0    0.0   0.       0.     1.0  15.0
     7    4.9   9.8    0.0    0.0    0.0    0.0   0.       0.      .8  10.0
     8    4.9   9.8    0.0    0.0    0.0    0.0   0.       0.      .8   8.5
     9    4.9   9.7    0.0    0.0    0.0    0.0   0.       0.      .6   5.0
    10    5.0   9.0    0.0    0.0    0.0    0.0   0.       0.     1.2  10.5
    11    4.7   0.0    0.0    0.0    0.0    0.0   0.       0.      .5   0.0
    12    4.9   0.0    0.0    0.0    0.0    0.0   0.       0.      .8   0.0
    13    4.9   9.8    0.0    0.0    0.0    0.0   0.       0.      .7   9.5
    14    5.0   0.0    0.0    0.0    0.0    0.0   0.       0.     1.0   0.0
    15    4.9   0.0    0.0    0.0    0.0    0.0   0.       0.     1.0   0.0
    16    4.9   9.8    0.0    0.0    0.0    0.0   0.       0.     1.3   9.0
    17    4.9   0.0    0.0    0.0    0.0    0.0   0.       0.     1.0   0.0
    18    4.9   0.0    0.0    0.0    0.0    0.0   0.       0.      .5   0.0
    19    4.9   9.8    0.0    0.0    0.0    0.0   0.       0.      .8   1.5
    20    4.9   9.5    0.0    0.0    0.0    0.0   0.       0.      .8   8.0


     MEAN 4.9   9.7    0.0    0.0    0.0    0.0   0.       0.      .9   9.7

  STD DEV  .1    .2    0.0    0.0    0.0    0.0   0.       0.      .3   3.7

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA HORSE CRK         DATE 17  SEPT      1982
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH  VEG.  SEED
        VEG.  REPR.                              CLASS  PERCENT TWIG  STALK
                                                                LNGTH LNGTH
****************************************************************************
    1    5.2   0.0   0.0    0.0    0.0    0.0    0.       0.    0.0   0.0
    2    5.3  10.2   0.0    0.0    0.0    0.0    0.       0.    0.0   0.0
    3    5.1  10.1   0.0    0.0    0.0    0.0    0.       0.    0.0   0.0
    4    5.3  10.4   0.0    0.0    0.0    0.0    0.       0.    0.0   0.0
    5    5.1   0.0   0.0    0.0    0.0    0.0    0.       0.    0.0   0.0
    6    5.2   0.0   0.0    0.0    0.0    0.0    0.       0.    0.0   0.0
    7    5.2  10.0   0.0    0.0    0.0    0.0    0.       0.    0.0   0.0
    8    5.2  10.5   0.0    0.0    0.0    0.0    0.       0.    0.0   0.0
    9    5.1  10.2   0.0    0.0    0.0    0.0    0.       0.    0.0   0.0
   10    5.2  10.3   0.0    0.0    0.0    0.0    0.       0.    0.0   0.0
   11    5.3  10.6   0.0    0.0    0.0    0.0    0.       0.    0.0   0.0
   12    5.1   0.0   0.0    0.0    0.0    0.0    0.       0.    0.0   0.0
   13    5.2  10.2   0.0    0.0    0.0    0.0    0.       0.    0.0   0.0
   14    5.1   0.0   0.0    0.0    0.0    0.0    0.       0.    0.0   0.0
   15    5.1   0.0   0.0    0.0    0.0    0.0    0.       0.    0.0   0.0
   16    5.2  10.1   0.0    0.0    0.0    0.0    0.       0.    0.0   0.0
   17    5.2   0.0   0.0    0.0    0.0    0.0    0.       0.    0.0   0.0
   18    5.2  10.1   0.0    0.0    0.0    0.0    0.       0.    0.0   0.0
   19    5.1   0.0   0.0    0.0    0.0    0.0    0.       0.    0.0   0.0
   20    5.2   0.0   0.0    0.0    0.0    0.0    0.       0.    0.0   0.0


   MEAN  5.2  10.2   0.0    0.0    0.0    0.0    0.       0.    0.0   0.0

 STD DEV  .1    .2   0.0    0.0    0.0    0.0    0.       0.    0.0   0.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
 ARTEMISIA TRIDENTATA   STUDY AREA MESA ANTEL          DATE 19  MAY       1982
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  PLANT PHENOLOGICAL   PLANT   PLANT   PLANT   PLANT   PLANT    DEAD     NEW   NEW
  NO.   STAGE SCORE    HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH    VEG.  SEED
         VEG.  REPR.                                   CLASS   PERCENT   TWIG  STALK
                                                                         LNGTH LNGTH
***************************************************************************************
     1     3.3    0.0     24.0    50.0    23.0     0.0    0.       0.      0.0    0.0
     2     3.3    0.0     26.0    49.0    23.0     0.0    0.       0.      0.0    0.0
     3     3.4    0.0     31.0    72.0    55.0     0.0    0.       0.      0.0    0.0
     4     3.3    0.0     11.0    27.0     9.0     0.0    0.       0.      0.0    0.0
     5     3.3    0.0     15.0    49.0    23.0     0.0    0.       0.      0.0    0.0
     6     3.3    0.0     25.0    57.0    36.0     0.0    0.       0.      0.0    0.0
     7     3.3    0.0     22.5    48.0    36.0     0.0    0.       0.      0.0    0.0
     8     3.3    0.0     22.0    45.0    22.0     0.0    0.       0.      0.0    0.0
     9     3.4    0.0     25.0    43.0    25.0     0.0    0.       0.      0.0    0.0
    10     3.2    0.0     17.0    26.0    18.0     0.0    0.       0.      0.0    0.0
    11     3.3    0.0     14.0    24.0    13.0     0.0    0.       0.      0.0    0.0
    12     3.3    0.0     32.0    71.0    22.0     0.0    0.       0.      0.0    0.0
    13     3.3    0.0     24.0    36.0    17.0     0.0    0.       0.      0.0    0.0
    14     3.2    0.0     24.0    64.0    26.0     0.0    0.       0.      0.0    0.0
    15     3.2    0.0     13.0    20.0    13.0     0.0    0.       0.      0.0    0.0
    16     3.3    0.0     21.0    44.0    19.0     0.0    0.       0.      0.0    0.0
    17     3.2    0.0     21.0    49.0    32.0     0.0    0.       0.      0.0    0.0
    18     3.2    0.0     20.0    37.0    19.0     0.0    0.       0.      0.0    0.0
    19     3.3    0.0     27.0    60.0    54.0     0.0    0.       0.      0.0    0.0
    20     3.4    0.0     20.0    40.0    15.0     0.0    0.       0.      0.0    0.0


      MEAN  3.3   0.0     21.7    45.6    25.0     0.0    0.       0.      0.0    0.0

 STD DEV     .1   0.0      5.6    14.8    12.3     0.0    0.       0.      0.0    0.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA MESA ANTEL          DATE 03  JUNE      1982
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
        VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                 LNGTH LNGTH
*******************************************************************************
    1     3.4   9.0   22.0   0.0    0.0    0.0   0.       0.     0.0   0.0
    2     3.3   0.0   24.0   0.0    0.0    0.0   0.       0.      .6   1.5
    3     3.4   9.3   32.0   0.0    0.0    0.0   0.       0.      .4   0.0
    4     3.3   9.0    8.0   0.0    0.0    0.0   0.       0.      .5    .5
    5     3.3   9.0   15.0   0.0    0.0    0.0   0.       0.      .4    .6
    6     3.4   9.0   25.0   0.0    0.0    0.0   0.       0.      .4    .4
    7     3.4   9.0   22.0   0.0    0.0    0.0   0.       0.      .6    .8
    8     3.4   9.0   23.5   0.0    0.0    0.0   0.       0.      .6    .7
    9     3.4   9.0   21.0   0.0    0.0    0.0   0.       0.      .5    .5
   10     3.3   0.0   25.0   0.0    0.0    0.0   0.       0.      .5   1.0
   11     3.3   9.0   18.0   0.0    0.0    0.0   0.       0.      .4   0.0
   12     3.4   9.0   32.5   0.0    0.0    0.0   0.       0.      .5    .8
   13     3.3   0.0   24.0   0.0    0.0    0.0   0.       0.      .6   0.0
   14     3.4   9.0   26.0   0.0    0.0    0.0   0.       0.      .6    .8
   15     3.4   9.0   13.0   0.0    0.0    0.0   0.       0.      .6    .8
   16     3.3   0.0   22.0   0.0    0.0    0.0   0.       0.      .5   0.0
   17     3.4   0.0   23.0   0.0    0.0    0.0   0.       0.      .5   0.0
   18     3.3   0.0   22.0   0.0    0.0    0.0   0.       0.      .4   0.0
   19     3.4   0.0   28.0   0.0    0.0    0.0   0.       0.      .5   0.0
   20     3.3   0.0   18.0   0.0    0.0    0.0   0.       0.      .4   0.0


     MEAN  3.4   9.0   22.2   0.0    0.0    0.0   0.       0.      .5    .8

  STD DEV   .1    .1    5.8   0.0    0.0    0.0   0.       0.      .1    .3

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA MESA ANTEL          DATE 15  JUNE      1982
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 PLANT PHENOLOGICAL   PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE    HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
        VEG.  REPR.                               CLASS  PERCENT  TWIG  STALK
                                                                  LNGTH LNGTH
****************************************************************************
   1     3.6   9.2    23.0    0.0    0.0    0.0   0.       0.     0.0   2.5
   2     3.7   9.2    24.5    0.0    0.0    0.0   0.       0.     0.0   3.5
   3     3.7   9.2    34.0    0.0    0.0    0.0   0.       0.     0.0   4.0
   4     3.6   0.0     9.5    0.0    0.0    0.0   0.       0.     0.0   0.0
   5     3.7   9.2    30.0    0.0    0.0    0.0   0.       0.     0.0   4.5
   6     3.7   9.2    27.0    0.0    0.0    0.0   0.       0.     0.0   2.5
   7     3.6   9.2    24.0    0.0    0.0    0.0   0.       0.     0.0   3.0
   8     3.6   9.2    26.0    0.0    0.0    0.0   0.       0.     0.0   3.5
   9     3.7   9.3    31.0    0.0    0.0    0.0   0.       0.     0.0   5.0
  10     3.7   9.2    20.0    0.0    0.0    0.0   0.       0.     0.0   3.5
  11     3.6   9.3    16.0    0.0    0.0    0.0   0.       0.     0.0   5.5
  12     3.8   9.3    33.0    0.0    0.0    0.0   0.       0.     0.0   4.0
  13     3.7   9.2    23.5    0.0    0.0    0.0   0.       0.     0.0   3.0
  14     3.7   9.1    21.5    0.0    0.0    0.0   0.       0.     0.0   2.5
  15     3.6   0.0    12.0    0.0    0.0    0.0   0.       0.     0.0   0.0
  16     3.7   9.2    21.5    0.0    0.0    0.0   0.       0.     0.0   3.5
  17     3.6   9.1    13.0    0.0    0.0    0.0   0.       0.     0.0   1.0
  18     3.6   9.2    17.0    0.0    0.0    0.0   0.       0.     0.0   2.0
  19     3.7   9.2    28.5    0.0    0.0    0.0   0.       0.     0.0   1.5
  20     3.6   9.1    18.5    0.0    0.0    0.0   0.       0.     0.0   1.0


   MEAN  3.7   9.2    22.7    0.0    0.0    0.0   0.       0.     0.0   3.1

 STD DEV  .1    .1     6.9    0.0    0.0    0.0   0.       0.     0.0   1.3

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA    STUDY AREA MESA ANTEL          DATE 30  JUNE      1982
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
        VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                 LNGTH LNGTH
*************************************************************************************
   1     3.8   0.0    0.0    0.0    0.0    0.0    0.      0.      .9   0.0
   2     3.9   9.4    0.0    0.0    0.0    0.0    0.      0.      .9   1.0
   3     3.9   9.5    0.0    0.0    0.0    0.0    0.      0.      .9   6.0
   4     4.0   0.0    0.0    0.0    0.0    0.0    0.      0.     1.5   0.0
   5     3.9   9.4    0.0    0.0    0.0    0.0    0.      0.      .9   5.0
   6     3.9   9.5    0.0    0.0    0.0    0.0    0.      0.      .9   4.5
   7     3.9   9.5    0.0    0.0    0.0    0.0    0.      0.      .8   4.5
   8     4.0   9.5    0.0    0.0    0.0    0.0    0.      0.     1.3   4.0
   9     3.9   9.5    0.0    0.0    0.0    0.0    0.      0.     1.0   6.5
  10     3.5   9.3    0.0    0.0    0.0    0.0    0.      0.      .5   4.5
  11     3.9   9.5    0.0    0.0    0.0    0.0    0.      0.      .8   4.5
  12     4.0   9.4    0.0    0.0    0.0    0.0    0.      0.     2.5   4.5
  13     4.0   9.5    0.0    0.0    0.0    0.0    0.      0.     2.5   5.0
  14     4.0   9.5    0.0    0.0    0.0    0.0    0.      0.     1.5   4.0
  15     3.6   9.3    0.0    0.0    0.0    0.0    0.      0.      .6   6.0
  16     3.8   9.3    0.0    0.0    0.0    0.0    0.      0.      .8   4.0
  17     3.9   9.5    0.0    0.0    0.0    0.0    0.      0.     1.0   3.5
  18     4.0   0.0    0.0    0.0    0.0    0.0    0.      0.     1.5   4.0
  19     4.0   9.5    0.0    0.0    0.0    0.0    0.      0.     1.5   0.0
  20     3.9   0.0    0.0    0.0    0.0    0.0    0.      0.     1.0   3.5

   MEAN  3.9   9.4    0.0    0.0    0.0    0.0    0.      0.     1.2   4.4

 STD DEV  .1    .1    0.0    0.0    0.0    0.0    0.      0.      .5   1.3

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA MESA ANTEL          DATE 10  JULY       1982
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
        VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                 LNGTH LNGTH
*****************************************************************************
    1    4.1   9.6    0.0    0.0    0.0    0.0   0.        0.      .8   7.0
    2    4.1   9.6    0.0    0.0    0.0    0.0   0.        0.     1.0  10.0
    3    4.2   9.6    0.0    0.0    0.0    0.0   0.        0.     1.0   8.0
    4    4.3   0.0    0.0    0.0    0.0    0.0   0.        0.     1.2   0.0
    5    4.3   9.6    0.0    0.0    0.0    0.0   0.        0.     1.5  12.0
    6    4.3   9.6    0.0    0.0    0.0    0.0   0.        0.     1.0  12.0
    7    4.2   9.6    0.0    0.0    0.0    0.0   0.        0.     1.0   7.0
    8    4.3   9.6    0.0    0.0    0.0    0.0   0.        0.      .9   9.0
    9    4.2   9.6    0.0    0.0    0.0    0.0   0.        0.      .8  13.0
   10    4.0   9.6    0.0    0.0    0.0    0.0   0.        0.      .5   7.0
   11    4.0   9.6    0.0    0.0    0.0    0.0   0.        0.      .6  12.0
   12    4.0   9.7    0.0    0.0    0.0    0.0   0.        0.      .6  11.0
   13    3.9   9.6    0.0    0.0    0.0    0.0   0.        0.      .5   8.0
   14    4.0   9.6    0.0    0.0    0.0    0.0   0.        0.      .6  10.0
   15    4.0   9.6    0.0    0.0    0.0    0.0   0.        0.      .9   9.0
   16    4.0   9.6    0.0    0.0    0.0    0.0   0.        0.      .9   7.0
   17    3.9   9.6    0.0    0.0    0.0    0.0   0.        0.      .5   7.0
   18    4.0   0.0    0.0    0.0    0.0    0.0   0.        0.      .5   5.0
   19    3.9   9.6    0.0    0.0    0.0    0.0   0.        0.      .5   0.0
   20    3.9   9.6    0.0    0.0    0.0    0.0   0.        0.      .4  10.0


   MEAN  4.1   9.6    0.0    0.0    0.0    0.0   0.        0.      .8   9.1

STD DEV   .1    .0    0.0    0.0    0.0    0.0   0.        0.      .3   2.3

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA MESA ANTEL   DATE 27 JULY 1982

PLANT NC.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.5	9.5	30.0	0.0	0.0	0.0	0.	0.	1.0	7.0
2	4.5	9.6	27.0	0.0	0.0	0.0	0.	0.	1.0	9.0
3	4.6	9.7	42.0	0.0	0.0	0.0	0.	0.	2.0	9.0
4	4.6	0.0	13.0	0.0	0.0	0.0	0.	0.	3.0	0.0
5	4.6	9.7	16.0	0.0	0.0	0.0	0.	0.	2.0	11.0
6	4.6	9.6	31.0	0.0	0.0	0.0	0.	0.	2.0	8.0
7	4.5	9.6	26.0	0.0	0.0	0.0	0.	0.	1.5	7.0
8	4.5	9.6	29.0	0.0	0.0	0.0	0.	0.	1.5	7.0
9	4.5	9.6	37.0	0.0	0.0	0.0	0.	0.	3.0	11.0
10	4.5	9.6	24.0	0.0	0.0	0.0	0.	0.	1.2	8.0
11	4.6	9.5	23.0	0.0	0.0	0.0	0.	0.	2.0	6.0
12	4.6	9.6	32.0	0.0	0.0	0.0	0.	0.	1.0	9.0
13	4.6	9.6	29.0	0.0	0.0	0.0	0.	0.	2.0	8.0
14	4.6	9.5	33.0	0.0	0.0	0.0	0.	0.	2.0	9.0
15	4.6	9.6	19.0	0.0	0.0	0.0	0.	0.	2.0	8.0
16	4.6	9.6	27.0	0.0	0.0	0.0	0.	0.	2.0	7.0
17	4.5	9.5	22.0	0.0	0.0	0.0	0.	0.	1.0	6.0
18	4.6	0.0	23.0	0.0	0.0	0.0	0.	0.	2.3	0.0
19	4.6	9.5	35.0	0.0	0.0	0.0	0.	0.	2.0	8.0
20	4.4	0.0	20.0	0.0	0.0	0.0	0.	0.	.8	0.0
MEAN	4.6	9.6	26.9	0.0	0.0	0.0	0.	0.	1.8	8.1
STD DEV	.1	.1	7.2	0.0	0.0	0.0	0.	0.	.6	1.5

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA   STUDY AREA MESA ANTEL   DATE 09 AUGUST 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.9	9.7	0.0	0.0	0.0	0.0	0.	0.	.7	6.0
2	4.9	9.8	0.0	0.0	0.0	0.0	0.	0.	1.0	10.0
3	4.9	9.8	0.0	0.0	0.0	0.0	0.	0.	1.0	10.0
4	4.8	0.0	0.0	0.0	0.0	0.0	0.	0.	.8	0.0
5	4.9	9.7	0.0	0.0	0.0	0.0	0.	0.	.8	11.0
6	4.9	9.7	0.0	0.0	0.0	0.0	0.	0.	.8	10.0
7	4.9	9.7	0.0	0.0	0.0	0.0	0.	0.	1.0	8.0
8	4.8	9.7	0.0	0.0	0.0	0.0	0.	0.	.8	10.0
9	4.9	9.8	0.0	0.0	0.0	0.0	0.	0.	.8	10.5
10	5.0	10.4	0.0	0.0	0.0	0.0	0.	0.	1.0	10.0
11	4.9	9.9	0.0	0.0	0.0	0.0	0.	0.	1.5	9.0
12	4.9	9.7	0.0	0.0	0.0	0.0	0.	0.	1.0	10.0
13	4.9	9.8	0.0	0.0	0.0	0.0	0.	0.	.9	8.0
14	4.9	9.7	0.0	0.0	0.0	0.0	0.	0.	1.2	14.0
15	4.7	0.0	0.0	0.0	0.0	0.0	0.	0.	.3	0.0
16	4.9	9.7	0.0	0.0	0.0	0.0	0.	0.	1.0	5.0
17	4.9	9.7	0.0	0.0	0.0	0.0	0.	0.	.6	7.0
18	4.9	0.0	0.0	0.0	0.0	0.0	0.	0.	1.0	0.0
19	4.8	9.8	0.0	0.0	0.0	0.0	0.	0.	1.0	6.0
20	4.9	0.0	0.0	0.0	0.0	0.0	0.	0.	.5	0.0
MEAN	4.9	9.8	0.0	0.0	0.0	0.0	0.	0.	.9	9.0
STD DEV	.1	.2	0.0	0.0	0.0	0.0	0.	0.	.3	2.3

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMISIA TRIDENTATA   STUDY AREA MESA ANTEL          DATE 11  SEPT      1982
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 PLANT PHENOLOGICAL  PLANT   PLANT   PLANT   PLANT   PLANT    DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT    LNGTH   WIDTH   DIAM    AGE     BRANCH   VEG.  SEED
        VEG.  REPR.                                  CLASS   PERCENT  TWIG  STALK
                                                                      LNGTH LNGTH
****************************************************************************************
    1     4.9  10.0    0.0     0.0     0.0     0.0   0.       0.      1.0   6.0
    2     4.7  10.0    0.0     0.0     0.0     0.0   0.       0.       .9  10.0
    3     4.9  10.0    0.0     0.0     0.0     0.0   0.       0.      1.5   9.0
    4     4.9   0.0    0.0     0.0     0.0     0.0   0.       0.      2.0   0.0
    5     4.9  10.0    0.0     0.0     0.0     0.0   0.       0.      3.0   9.0
    6     4.9  10.0    0.0     0.0     0.0     0.0   0.       0.      2.5   7.0
    7     4.6  10.0    0.0     0.0     0.0     0.0   0.       0.       .9   6.5
    8     4.9  10.0    0.0     0.0     0.0     0.0   0.       0.      1.0   5.0
    9     4.9  10.0    0.0     0.0     0.0     0.0   0.       0.      3.0   5.5
   10     4.9  10.1    0.0     0.0     0.0     0.0   0.       0.      2.0   7.0
   11     4.9  10.0    0.0     0.0     0.0     0.0   0.       0.      2.5   8.0
   12     4.9  10.0    0.0     0.0     0.0     0.0   0.       0.      2.5   7.0
   13     4.9   9.9    0.0     0.0     0.0     0.0   0.       0.      3.0   5.0
   14     4.9  10.1    0.0     0.0     0.0     0.0   0.       0.      4.0   8.0
   15     4.9  10.0    0.0     0.0     0.0     0.0   0.       0.      3.0   6.0
   16     4.9  10.0    0.0     0.0     0.0     0.0   0.       0.      3.0   6.0
   17     4.9  10.0    0.0     0.0     0.0     0.0   0.       0.      3.0   8.0
   18     4.9   0.0    0.0     0.0     0.0     0.0   0.       0.      2.5   0.0
   19     4.7   9.9    0.0     0.0     0.0     0.0   0.       0.      2.0   5.0
   20     4.9   0.0    0.0     0.0     0.0     0.0   0.       0.      3.0   0.0


   MEAN   4.9  10.0    0.0     0.0     0.0     0.0   0.       0.      2.3   6.9

 STD DEV   .1    .1    0.0     0.0     0.0     0.0   0.       0.       .9   1.5

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA OWL DRAW           DATE 01  MAY       1982
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 PLANT PHENOLOGICAL   PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE    HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
        VEG.  REPR.                               CLASS  PERCENT  TWIG  STALK
                                                                  LNGTH LNGTH
****************************************************************************
   1     3.2   0.0    53.0    0.0    0.0    0.0   0.        0.    0.0   0.0
   2     3.2   0.0    44.0    0.0    0.0    0.0   0.        0.    0.0   0.0
   3     3.3   0.0    26.5    0.0    0.0    0.0   0.        0.    0.0   0.0
   4     2.6   0.0     7.0    0.0    0.0    0.0   0.        0.    0.0   0.0
   5     3.2   0.0    23.0    0.0    0.0    0.0   0.        0.    0.0   0.0
   6     3.3   0.0    21.5    0.0    0.0    0.0   0.        0.    0.0   0.0
   7     3.1   0.0    13.0    0.0    0.0    0.0   0.        0.    0.0   0.0
   8     3.2   0.0    20.0    0.0    0.0    0.0   0.        0.    0.0   0.0
   9     3.3   0.0    46.0    0.0    0.0    0.0   0.        0.    0.0   0.0
  10     3.2   0.0    10.0    0.0    0.0    0.0   0.        0.    0.0   0.0
  11     3.2   0.0    60.0    0.0    0.0    0.0   0.        0.    0.0   0.0
  12     3.2   0.0    71.0    0.0    0.0    0.0   0.        0.    0.0   0.0
  13     3.3   0.0    10.0    0.0    0.0    0.0   0.        0.    0.0   0.0
  14     3.2   0.0    54.0    0.0    0.0    0.0   0.        0.    0.0   0.0
  15     3.0   0.0    27.0    0.0    0.0    0.0   0.        0.    0.0   0.0
  16     3.3   0.0    11.5    0.0    0.0    0.0   0.        0.    0.0   0.0
  17     3.2   0.0     5.5    0.0    0.0    0.0   0.        0.    0.0   0.0
  18     3.1   0.0    15.0    0.0    0.0    0.0   0.        0.    0.0   0.0
  19     3.2   0.0     6.5    0.0    0.0    0.0   0.        0.    0.0   0.0
  20     3.2   0.0    23.0    0.0    0.0    0.0   0.        0.    0.0   0.0


    MEAN 3.2   0.0    27.4    0.0    0.0    0.0   0.        0.    0.0   0.0

 STD DEV  .2   0.0    20.0    0.0    0.0    0.0   0.        0.    0.0   0.0

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA OWL DRAW   DATE 17 MAY 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.4	0.0	21.5	83.0	68.0	0.0	0.	0.	0.0	0.0
2	3.3	0.0	51.0	46.0	58.0	0.0	0.	0.	0.0	0.0
3	3.4	0.0	27.0	41.0	59.0	0.0	0.	0.	0.0	0.0
4	3.2	0.0	8.0	21.0	11.0	0.0	0.	0.	0.0	0.0
5	3.3	0.0	19.5	36.5	32.0	0.0	0.	0.	0.0	0.0
6	3.4	0.0	23.0	36.5	20.0	0.0	0.	0.	0.0	0.0
7	3.3	0.0	9.5	15.0	4.0	0.0	0.	0.	0.0	0.0
8	3.2	0.0	20.5	29.0	13.5	0.0	0.	0.	0.0	0.0
9	3.3	0.0	49.5	80.5	51.0	0.0	0.	0.	0.0	0.0
10	3.4	0.0	5.5	21.0	10.5	0.0	0.	0.	0.0	0.0
11	3.3	0.0	59.0	82.0	71.0	0.0	0.	0.	0.0	0.0
12	3.4	0.0	71.0	96.0	56.0	0.0	0.	0.	0.0	0.0
13	3.4	0.0	39.5	52.0	39.5	0.0	0.	0.	0.0	0.0
14	3.4	0.0	51.5	100.5	84.0	0.0	0.	0.	0.0	0.0
15	3.3	0.0	29.0	27.5	16.0	0.0	0.	0.	0.0	0.0
16	3.2	0.0	9.5	18.0	5.5	0.0	0.	0.	0.0	0.0
17	3.2	0.0	4.5	9.0	8.5	0.0	0.	0.	0.0	0.0
18	3.3	0.0	12.5	18.0	8.0	0.0	0.	0.	0.0	0.0
19	3.2	0.0	3.5	8.0	4.5	0.0	0.	0.	0.0	0.0
20	3.4	0.0	33.5	29.0	24.5	0.0	0.	0.	0.0	0.0
MEAN	3.3	0.0	27.4	42.5	32.2	0.0	0.	0.	0.0	0.0
STD DEV	.1	0.0	20.1	29.8	26.1	0.0	0.	0.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMISIA TRIDENTATA   STUDY AREA OWL DRAW          DATE 01  JUNE      1982
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  PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
  NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
         VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                  LNGTH LNGTH
*****************************************************************************
    1    3.4   9.3    54.0    0.0    0.0    0.0   0.       0.     0.0   3.0
    2    3.5   9.1    47.0    0.0    0.0    0.0   0.       0.     0.0   1.0
    3    3.5   9.2    27.0    0.0    0.0    0.0   0.       0.     0.0   3.0
    4    3.5   9.2    40.0    0.0    0.0    0.0   0.       0.     0.0   2.5
    5    3.5   9.1    19.0    0.0    0.0    0.0   0.       0.     0.0   1.0
    6    3.5   9.1    23.0    0.0    0.0    0.0   0.       0.     0.0   1.5
    7    3.4   9.1    14.0    0.0    0.0    0.0   0.       0.     0.0   3.5
    8    3.4   9.0    23.0    0.0    0.0    0.0   0.       0.     0.0   0.0
    9    3.5   9.1    52.0    0.0    0.0    0.0   0.       0.     0.0   1.5
   10    3.5   9.0    10.0    0.0    0.0    0.0   0.       0.     0.0   0.0
   11    3.5   9.1    60.0    0.0    0.0    0.0   0.       0.     0.0   1.5
   12    3.6   9.2    62.0    0.0    0.0    0.0   0.       0.     0.0   3.5
   13    3.5   0.0    10.0    0.0    0.0    0.0   0.       0.     0.0   0.0
   14    3.5   9.2    51.0    0.0    0.0    0.0   0.       0.     0.0   2.0
   15    3.5   9.2    16.0    0.0    0.0    0.0   0.       0.     0.0   4.0
   16    3.4   9.0     9.5    0.0    0.0    0.0   0.       0.     0.0   0.0
   17    3.4   0.0     4.5    0.0    0.0    0.0   0.       0.     0.0   0.0
   18    3.5   9.0     8.0    0.0    0.0    0.0   0.       0.     0.0   0.0
   19    3.4   0.0     4.0    0.0    0.0    0.0   0.       0.     0.0   0.0
   20    3.5   9.1    16.0    0.0    0.0    0.0   0.       0.     0.0   1.5


    MEAN 3.5   9.1    27.5    0.0    0.0    0.0   0.       0.     0.0   2.3

 STD DEV  .1    .1    20.0    0.0    0.0    0.0   0.       0.     0.0   1.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA OWL DRAW            DATE 28  JUNE      1982
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
        VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                 LNGTH LNGTH
********************************************************************************
   1     4.0   9.4   55.0    0.0    0.0    0.0   0.        0.    0.0   8.0
   2     3.9   9.4   50.0    0.0    0.0    0.0   0.        0.    0.0   6.0
   3     4.0   9.4   18.5    0.0    0.0    0.0   0.        0.    0.0   5.0
   4     4.0   9.4   46.0    0.0    0.0    0.0   0.        0.    0.0   5.0
   5     4.0   0.0   18.0    0.0    0.0    0.0   0.        0.    0.0   0.0
   6     3.9   9.3   38.0    0.0    0.0    0.0   0.        0.    0.0   5.5
   7     4.0   9.3   14.5    0.0    0.0    0.0   0.        0.    0.0   3.0
   8     3.9   0.0   22.0    0.0    0.0    0.0   0.        0.    0.0   0.0
   9     4.0   9.3   48.5    0.0    0.0    0.0   0.        0.    0.0   5.0
  10     3.9   9.3    6.5    0.0    0.0    0.0   0.        0.    0.0   3.0
  11     4.0   9.3   57.0    0.0    0.0    0.0   0.        0.    0.0   4.0
  12     4.0   9.3   62.0    0.0    0.0    0.0   0.        0.    0.0   5.0
  13     3.9   0.0    8.5    0.0    0.0    0.0   0.        0.    0.0   0.0
  14     4.1   9.4   56.0    0.0    0.0    0.0   0.        0.    0.0   6.0
  15     4.0   9.3   17.0    0.0    0.0    0.0   0.        0.    0.0   3.0
  16     4.0   0.0   11.0    0.0    0.0    0.0   0.        0.    0.0   0.0
  17     3.9   0.0    6.0    0.0    0.0    0.0   0.        0.    0.0   0.0
  18     3.9   9.2    8.5    0.0    0.0    0.0   0.        0.    0.0   2.0
  19     3.9   0.0    3.5    0.0    0.0    0.0   0.        0.    0.0   0.0
  20     4.0   0.0   29.0    0.0    0.0    0.0   0.        0.    0.0   0.0


   MEAN  4.0   9.3   28.8    0.0    0.0    0.0   0.        0.    0.0   4.7

STD DEV   .1    .1   20.5    0.0    0.0    0.0   0.        0.    0.0   1.6

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA OWL DRAW   DATE 11 JULY 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.3	9.5	0.0	0.0	0.0	0.0	0.	0.	2.0	9.0
2	4.3	9.5	0.0	0.0	0.0	0.0	0.	0.	1.5	3.5
3	4.3	9.5	0.0	0.0	0.0	0.0	0.	0.	2.0	8.5
4	4.3	9.5	0.0	0.0	0.0	0.0	0.	0.	2.5	6.0
5	4.3	0.0	0.0	0.0	0.0	0.0	0.	0.	1.0	0.0
6	4.3	9.5	0.0	0.0	0.0	0.0	0.	0.	2.5	7.0
7	4.3	0.0	0.0	0.0	0.0	0.0	0.	0.	2.0	0.0
8	4.0	0.0	0.0	0.0	0.0	0.0	0.	0.	.8	0.0
9	4.3	9.4	0.0	0.0	0.0	0.0	0.	0.	1.0	5.5
10	4.2	0.0	0.0	0.0	0.0	0.0	0.	0.	.9	0.0
11	4.3	9.5	0.0	0.0	0.0	0.0	0.	0.	2.5	5.0
12	4.3	9.5	0.0	0.0	0.0	0.0	0.	0.	2.0	5.5
13	4.3	9.5	0.0	0.0	0.0	0.0	0.	0.	1.5	4.5
14	4.3	9.5	0.0	0.0	0.0	0.0	0.	0.	1.5	6.0
15	4.3	0.0	0.0	0.0	0.0	0.0	0.	0.	2.0	0.0
16	4.3	0.0	0.0	0.0	0.0	0.0	0.	0.	1.5	0.0
17	4.0	0.0	0.0	0.0	0.0	0.0	0.	0.	.8	0.0
18	4.2	0.0	0.0	0.0	0.0	0.0	0.	0.	1.3	0.0
19	3.9	0.0	0.0	0.0	0.0	0.0	0.	0.	.3	0.0
20	4.3	0.0	0.0	0.0	0.0	0.0	0.	0.	2.0	0.0
MEAN	4.2	9.5	0.0	0.0	0.0	0.0	0.	0.	1.6	6.1
STD DEV	.1	.0	0.0	0.0	0.0	0.0	0.	0.	.6	1.7

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA   STUDY AREA OWL DRAW   DATE 10 AUGUST 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.6	9.8	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
2	4.5	9.8	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
3	4.6	9.8	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
4	4.6	9.8	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
5	4.4	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
6	4.5	9.8	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
7	4.6	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
8	4.3	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
9	4.5	9.6	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
10	4.6	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
11	4.6	9.6	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
12	4.6	9.7	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
13	4.5	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
14	4.6	9.7	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
15	4.6	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
16	4.6	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
17	4.3	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
18	4.5	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
19	4.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
20	4.6	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
MEAN	4.5	9.7	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
STD DEV	.2	.1	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMISIA TRIDENTATA   STUDY AREA OWL DRAW            DATE 27  AUGUST   1982
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
       VEG.  REPR.                               CLASS  PERCENT  TWIG  STALK
                                                                 LNGTH LNGTH
********************************************************************************
   1   4.7   9.9     0.0    0.0    0.0    0.0    0.       0.     1.0  10.0
   2   4.7   9.8     0.0    0.0    0.0    0.0    0.       0.     1.0   7.0
   3   4.7   9.8     0.0    0.0    0.0    0.0    0.       0.     1.0   8.0
   4   4.7   9.8     0.0    0.0    0.0    0.0    0.       0.      .8   5.0
   5   4.6   0.0     0.0    0.0    0.0    0.0    0.       0.      .6   0.0
   6   4.5   9.7     0.0    0.0    0.0    0.0    0.       0.      .7   4.0
   7   4.5   0.0     0.0    0.0    0.0    0.0    0.       0.      .3   0.0
   8   4.4   0.0     0.0    0.0    0.0    0.0    0.       0.      .3   0.0
   9   4.7   9.8     0.0    0.0    0.0    0.0    0.       0.     1.0   2.0
  10   4.4   0.0     0.0    0.0    0.0    0.0    0.       0.      .3   0.0
  11   4.7   9.7     0.0    0.0    0.0    0.0    0.       0.     1.0   3.0
  12   4.8   9.8     0.0    0.0    0.0    0.0    0.       0.     1.2   6.0
  13   4.5   0.0     0.0    0.0    0.0    0.0    0.       0.      .2   0.0
  14   4.7   9.8     0.0    0.0    0.0    0.0    0.       0.     1.2   7.0
  15   4.8   0.0     0.0    0.0    0.0    0.0    0.       0.     1.5   0.0
  16   4.7   0.0     0.0    0.0    0.0    0.0    0.       0.      .5   0.0
  17   4.7   0.0     0.0    0.0    0.0    0.0    0.       0.      .5   0.0
  18   4.7   9.8     0.0    0.0    0.0    0.0    0.       0.     1.3   6.0
  19   4.5   0.0     0.0    0.0    0.0    0.0    0.       0.      .3   0.0
  20   4.7   0.0     0.0    0.0    0.0    0.0    0.       0.     1.0   0.0


  MEAN 4.6   9.8     0.0    0.0    0.0    0.0    0.       0.      .8   5.8

STD DEV .1    .1     0.0    0.0    0.0    0.0    0.       0.      .4   2.4

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA OWL DRAW          DATE 16  SEPT      1982
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
        VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                 LNGTH LNGTH
***************************************************************************
    1    5.0  11.1    0.0    0.0    0.0    0.0    0.      0.     0.0   0.0
    2    5.1  11.0    0.0    0.0    0.0    0.0    0.      0.     0.0   0.0
    3    5.1  11.5    0.0    0.0    0.0    0.0    0.      0.     0.0   0.0
    4    5.0  11.0    0.0    0.0    0.0    0.0    0.      0.     0.0   0.0
    5    5.0   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0   0.0
    6    5.1   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0   0.0
    7    5.1   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0   0.0
    8    5.0   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0   0.0
    9    5.0  10.8    0.0    0.0    0.0    0.0    0.      0.     0.0   0.0
   10    5.1   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0   0.0
   11    5.1   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0   0.0
   12    5.1  10.9    0.0    0.0    0.0    0.0    0.      0.     0.0   0.0
   13    5.2   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0   0.0
   14    5.1  12.0    0.0    0.0    0.0    0.0    0.      0.     0.0   0.0
   15    5.1   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0   0.0
   16    5.0   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0   0.0
   17    5.0   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0   0.0
   18    5.0   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0   0.0
   19    5.1   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0   0.0
   20    5.1   0.0    0.0    0.0    0.0    0.0    0.      0.     0.0   0.0


   MEAN  5.1  11.2    0.0    0.0    0.0    0.0    0.      0.     0.0   0.0

STD DEV   .1    .4    0.0    0.0    0.0    0.0    0.      0.     0.0   0.0

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA STUDY AREA RED WASH 2 DATE 29 APRIL 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	2.7	0.0	46.0	0.0	0.0	0.0	0.	0.	.1	0.0
2	1.8	0.0	62.0	0.0	0.0	0.0	0.	0.	.1	0.0
3	2.6	0.0	40.0	0.0	0.0	0.0	0.	0.	.1	0.0
4	2.7	0.0	34.0	0.0	0.0	0.0	0.	0.	.1	0.0
5	2.4	0.0	27.0	0.0	0.0	0.0	0.	0.	.1	0.0
6	2.4	0.0	22.0	0.0	0.0	0.0	0.	0.	.1	0.0
7	2.2	0.0	36.0	0.0	0.0	0.0	0.	0.	.1	0.0
8	2.8	0.0	26.5	0.0	0.0	0.0	0.	0.	.1	0.0
9	2.0	0.0	33.0	0.0	0.0	0.0	0.	0.	.1	0.0
10	2.2	0.0	36.5	0.0	0.0	0.0	0.	0.	.1	0.0
11	1.5	0.0	17.0	0.0	0.0	0.0	0.	0.	0.0	0.0
12	1.5	0.0	33.0	0.0	0.0	0.0	0.	0.	0.0	0.0
13	2.5	0.0	9.5	0.0	0.0	0.0	0.	0.	.1	0.0
14	2.7	0.0	27.0	0.0	0.0	0.0	0.	0.	.1	0.0
15	1.4	0.0	14.0	0.0	0.0	0.0	0.	0.	0.0	0.0
16	2.0	0.0	37.0	0.0	0.0	0.0	0.	0.	0.0	0.0
17	2.0	0.0	21.0	0.0	0.0	0.0	0.	0.	0.0	0.0
18	2.7	0.0	19.0	0.0	0.0	0.0	0.	0.	.1	0.0
19	2.3	0.0	20.0	0.0	0.0	0.0	0.	0.	.1	0.0
20	1.0	0.0	41.0	0.0	0.0	0.0	0.	0.	0.0	0.0
MEAN	2.2	0.0	30.1	0.0	0.0	0.0	0.	0.	.1	0.0
STD DEV	.5	0.0	12.4	0.0	0.0	0.0	0.	0.	.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA STUDY AREA RED WASH 2 DATE 20 MAY 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.2	0.0	45.0	81.0	62.0	0.0	0.	0.	0.0	0.0
2	1.0	0.0	26.0	60.0	10.0	0.0	0.	98.	0.0	0.0
3	3.1	0.0	45.0	139.0	101.0	0.0	0.	0.	0.0	0.0
4	3.2	0.0	36.5	26.0	20.0	0.0	0.	0.	0.0	0.0
5	3.1	0.0	30.0	36.0	34.0	0.0	0.	0.	0.0	0.0
6	3.2	0.0	26.0	42.0	33.0	0.0	0.	0.	0.0	0.0
7	3.2	0.0	40.0	70.0	40.0	0.0	0.	0.	0.0	0.0
8	3.1	0.0	28.0	35.0	21.0	0.0	0.	0.	0.0	0.0
9	3.2	0.0	30.0	160.0	111.0	0.0	0.	0.	0.0	0.0
10	3.2	0.0	30.0	83.0	60.0	0.0	0.	0.	0.0	0.0
11	3.2	0.0	15.0	24.0	14.0	0.0	0.	0.	0.0	0.0
12	3.2	0.0	38.0	135.0	88.0	0.0	0.	0.	0.0	0.0
13	3.2	0.0	10.5	24.0	14.0	0.0	0.	0.	0.0	0.0
14	3.2	0.0	34.0	76.0	73.0	0.0	0.	0.	0.0	0.0
15	3.2	0.0	12.0	39.0	16.0	0.0	0.	0.	0.0	0.0
16	3.3	0.0	30.0	80.0	53.0	0.0	0.	0.	0.0	0.0
17	3.2	0.0	20.0	56.0	46.0	0.0	0.	0.	0.0	0.0
18	3.2	0.0	46.0	176.0	120.0	0.0	0.	0.	0.0	0.0
19	3.2	0.0	25.0	43.0	46.0	0.0	0.	0.	0.0	0.0
20	3.1	0.0	43.0	66.0	40.0	0.0	0.	0.	0.0	0.0
MEAN	3.1	0.0	30.5	72.6	50.1	0.0	0.	49.	0.0	0.0
STD DEV	.5	0.0	10.7	45.9	33.5	0.0	0.	69.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA STUDY AREA RED WASH 2 DATE 2 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.3	0.0	40.0	0.0	0.0	0.0	0.	0.	.2	0.0
2	3.2	0.0	29.0	0.0	0.0	0.0	0.	0.	.1	0.0
3	3.3	9.0	43.5	0.0	0.0	0.0	0.	0.	.1	0.0
4	3.3	0.0	23.0	0.0	0.0	0.0	0.	0.	0.0	0.0
5	3.2	0.0	35.0	0.0	0.0	0.0	0.	0.	0.0	0.0
6	3.3	0.0	41.0	0.0	0.0	0.0	0.	0.	0.0	0.0
7	3.3	9.0	37.0	0.0	0.0	0.0	0.	0.	.1	0.0
8	3.2	9.0	27.0	0.0	0.0	0.0	0.	0.	0.0	0.0
9	3.3	9.3	34.0	0.0	0.0	0.0	0.	0.	.2	1.0
10	3.2	9.3	36.0	0.0	0.0	0.0	0.	0.	0.0	.5
11	3.2	0.0	20.0	0.0	0.0	0.0	0.	0.	0.0	0.0
12	3.2	0.0	37.0	0.0	0.0	0.0	0.	0.	0.0	0.0
13	3.3	0.0	13.0	0.0	0.0	0.0	0.	0.	.1	0.0
14	3.2	0.0	35.0	0.0	0.0	0.0	0.	0.	0.0	0.0
15	3.3	0.0	16.0	0.0	0.0	0.0	0.	0.	.1	0.0
16	3.3	9.3	34.0	0.0	0.0	0.0	0.	0.	.1	1.0
17	3.2	0.0	21.5	0.0	0.0	0.0	0.	0.	0.0	0.0
18	3.3	9.1	46.0	0.0	0.0	0.0	0.	0.	.1	.1
19	3.3	9.0	23.0	0.0	0.0	0.0	0.	0.	.2	.1
20	3.2	9.0	43.5	0.0	0.0	0.0	0.	0.	0.0	.1
MEAN	3.3	9.1	31.7	0.0	0.0	0.0	0.	0.	.1	.5
STD DEV	.1	.1	9.6	0.0	0.0	0.0	0.	0.	.0	.4

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA STUDY AREA RED WASH 2 DATE 14 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.4	9.2	46.0	0.0	0.0	0.0	0.	0.	0.0	3.0
2	3.4	0.0	26.0	0.0	0.0	0.0	0.	0.	0.0	0.0
3	3.5	9.1	39.0	0.0	0.0	0.0	0.	0.	0.0	2.5
4	3.5	9.1	33.0	0.0	0.0	0.0	0.	0.	0.0	1.0
5	3.9	9.1	42.0	0.0	0.0	0.0	0.	0.	0.0	2.5
6	4.0	9.1	27.0	0.0	0.0	0.0	0.	0.	0.0	3.5
7	3.4	9.2	35.0	0.0	0.0	0.0	0.	0.	0.0	3.0
8	3.9	9.2	35.0	0.0	0.0	0.0	0.	0.	0.0	6.5
9	3.4	9.2	33.0	0.0	0.0	0.0	0.	0.	0.0	3.0
10	3.4	9.1	38.0	0.0	0.0	0.0	0.	0.	0.0	2.5
11	3.4	0.0	17.0	0.0	0.0	0.0	0.	0.	0.0	0.0
12	3.4	9.2	37.0	0.0	0.0	0.0	0.	0.	0.0	2.0
13	3.6	0.0	12.0	0.0	0.0	0.0	0.	0.	0.0	0.0
14	3.5	9.1	34.0	0.0	0.0	0.0	0.	0.	0.0	1.5
15	3.7	0.0	13.0	0.0	0.0	0.0	0.	0.	0.0	0.0
16	3.5	9.2	33.5	0.0	0.0	0.0	0.	0.	0.0	2.5
17	3.5	9.2	22.0	0.0	0.0	0.0	0.	0.	0.0	3.0
18	3.5	9.2	55.0	0.0	0.0	0.0	0.	0.	0.0	2.8
19	3.7	9.2	23.0	0.0	0.0	0.0	0.	0.	0.0	3.3
20	3.5	9.0	42.0	0.0	0.0	0.0	0.	0.	0.0	0.0
MEAN	3.6	9.1	32.1	0.0	0.0	0.0	0.	0.	0.0	2.8
STD DEV	.2	.1	11.0	0.0	0.0	0.0	0.	0.	0.0	1.2

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA   STUDY AREA RED WASH 2   DATE 28 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.6	9.3	0.0	0.0	0.0	0.0	0.	0.	.9	4.5
2	3.6	0.0	0.0	0.0	0.0	0.0	0.	0.	.3	0.0
3	3.6	9.3	0.0	0.0	0.0	0.0	0.	0.	.5	3.6
4	3.6	9.3	0.0	0.0	0.0	0.0	0.	0.	1.0	1.5
5	3.6	9.3	0.0	0.0	0.0	0.0	0.	0.	.5	3.0
6	3.6	9.3	0.0	0.0	0.0	0.0	0.	0.	.5	3.0
7	3.6	9.3	0.0	0.0	0.0	0.0	0.	0.	1.0	4.5
8	3.7	9.4	0.0	0.0	0.0	0.0	0.	0.	1.5	8.0
9	3.7	9.5	0.0	0.0	0.0	0.0	0.	0.	1.5	7.0
10	3.6	9.3	0.0	0.0	0.0	0.0	0.	0.	.8	4.0
11	3.6	0.0	0.0	0.0	0.0	0.0	0.	0.	.4	0.0
12	3.6	9.3	0.0	0.0	0.0	0.0	0.	0.	.5	4.0
13	3.6	0.0	0.0	0.0	0.0	0.0	0.	0.	.5	0.0
14	3.6	9.3	0.0	0.0	0.0	0.0	0.	0.	.7	3.6
15	3.6	0.0	0.0	0.0	0.0	0.0	0.	0.	.7	0.0
16	3.6	9.3	0.0	0.0	0.0	0.0	0.	0.	.6	4.5
17	3.6	9.3	0.0	0.0	0.0	0.0	0.	0.	.7	3.6
18	3.5	9.3	0.0	0.0	0.0	0.0	0.	0.	.8	5.0
19	3.5	9.3	0.0	0.0	0.0	0.0	0.	0.	.5	4.0
20	3.5	0.0	0.0	0.0	0.0	0.0	0.	0.	.9	0.0
MEAN	3.6	9.3	0.0	0.0	0.0	0.0	0.	0.	.7	4.3
STD DEV	.1	.1	0.0	0.0	0.0	0.0	0.	0.	.3	1.6

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA STUDY AREA RED WASH 2 DATE 11 JULY 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.9	9.4	0.0	0.0	0.0	0.0	0.	0.	.5	9.0
2	3.7	0.0	0.0	0.0	0.0	0.0	0.	0.	.2	0.0
3	4.0	9.7	0.0	0.0	0.0	0.0	0.	0.	.4	9.0
4	4.1	9.7	0.0	0.0	0.0	0.0	0.	0.	.4	7.0
5	4.0	9.4	0.0	0.0	0.0	0.0	0.	0.	.4	5.0
6	4.0	9.4	0.0	0.0	0.0	0.0	0.	0.	.3	4.0
7	4.0	9.4	0.0	0.0	0.0	0.0	0.	0.	.4	7.0
8	4.0	9.4	0.0	0.0	0.0	0.0	0.	0.	1.0	10.0
9	4.1	9.7	0.0	0.0	0.0	0.0	0.	0.	.8	10.0
10	4.0	9.4	0.0	0.0	0.0	0.0	0.	0.	.9	9.0
11	4.0	0.0	0.0	0.0	0.0	0.0	0.	0.	.7	0.0
12	4.0	9.4	0.0	0.0	0.0	0.0	0.	0.	.7	10.0
13	3.9	0.0	0.0	0.0	0.0	0.0	0.	0.	.5	0.0
14	4.0	9.4	0.0	0.0	0.0	0.0	0.	0.	.8	6.0
15	4.1	0.0	0.0	0.0	0.0	0.0	0.	0.	.5	0.0
16	4.1	9.4	0.0	0.0	0.0	0.0	0.	0.	.7	7.0
17	4.0	9.4	0.0	0.0	0.0	0.0	0.	0.	.5	7.0
18	4.1	9.4	0.0	0.0	0.0	0.0	0.	0.	.7	8.0
19	4.1	9.4	0.0	0.0	0.0	0.0	0.	0.	.6	5.0
20	4.1	0.0	0.0	0.0	0.0	0.0	0.	0.	.6	0.0
MEAN	4.0	9.5	0.0	0.0	0.0	0.0	0.	0.	.6	7.5
STD DEV	.1	.1	0.0	0.0	0.0	0.0	0.	0.	.2	2.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA STUDY AREA RED WASH 2 DATE 25 JULY 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.4	9.6	53.0	0.0	0.0	0.0	0.	0.	1.0	8.5
2	3.9	0.0	29.0	0.0	0.0	0.0	0.	0.	0.0	0.0
3	4.3	9.5	46.0	0.0	0.0	0.0	0.	0.	.8	12.5
4	4.3	9.5	22.0	0.0	0.0	0.0	0.	0.	1.0	8.0
5	4.3	9.6	48.0	0.0	0.0	0.0	0.	0.	1.0	8.0
6	4.5	9.6	26.0	0.0	0.0	0.0	0.	0.	1.4	5.0
7	4.6	9.6	47.0	0.0	0.0	0.0	0.	0.	2.5	14.0
8	4.6	9.6	50.0	0.0	0.0	0.0	0.	0.	2.5	10.0
9	4.5	9.6	43.0	0.0	0.0	0.0	0.	0.	1.4	11.0
10	4.3	9.6	40.0	0.0	0.0	0.0	0.	0.	.9	8.0
11	4.3	0.0	20.0	0.0	0.0	0.0	0.	0.	.5	0.0
12	4.5	9.6	32.0	0.0	0.0	0.0	0.	0.	1.0	10.0
13	4.2	0.0	15.0	0.0	0.0	0.0	0.	0.	.4	0.0
14	4.3	9.5	33.0	0.0	0.0	0.0	0.	0.	.5	6.0
15	4.1	0.0	18.0	0.0	0.0	0.0	0.	0.	.3	0.0
16	4.5	9.6	40.0	0.0	0.0	0.0	0.	0.	1.8	9.0
17	4.4	9.6	27.0	0.0	0.0	0.0	0.	0.	1.0	7.0
18	4.5	9.5	48.0	0.0	0.0	0.0	0.	0.	1.8	8.0
19	4.4	9.5	28.0	0.0	0.0	0.0	0.	0.	1.0	6.5
20	4.5	0.0	38.0	0.0	0.0	0.0	0.	0.	1.5	0.0
MEAN	4.4	9.6	35.2	0.0	0.0	0.0	0.	0.	1.2	8.8
STD DEV	.2	.0	11.7	0.0	0.0	0.0	0.	0.	.6	2.4

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA   STUDY AREA RED WASH 2   DATE 10 AUGUST 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.9	9.7	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
2	4.6	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
3	4.8	9.6	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
4	4.9	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
5	4.8	9.7	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
6	4.9	9.7	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
7	4.9	9.8	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
8	4.9	9.7	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
9	4.9	9.8	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
10	4.8	9.7	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
11	4.7	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
12	4.8	9.8	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
13	4.7	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
14	4.8	9.6	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
15	4.7	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
16	4.9	9.7	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
17	4.9	9.8	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
18	4.8	9.7	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
19	4.8	9.7	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
20	4.8	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
MEAN	4.8	9.7	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
STD DEV	.1	.1	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMISIA TRIDENTATA   STUDY AREA SHOSHONI 7         DATE 29  APRIL    1982
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE     BRANCH  VEG.  SEED
        VEG.  REPR.                              CLASS   PERCENT TWIG  STALK
                                                                 LNGTH LNGTH
******************************************************************************
    1   3.1   0.0    23.0    0.0    0.0    0.0   0.        0.     0.0   0.0
    2   2.3   0.0    11.0    0.0    0.0    0.0   0.        0.     0.0   0.0
    3   3.0   0.0    14.0    0.0    0.0    0.0   0.        0.     0.0   0.0
    4   2.9   0.0    21.0    0.0    0.0    0.0   0.        0.     0.0   0.0
    5   2.8   0.0    10.0    0.0    0.0    0.0   0.        0.     0.0   0.0
    6   2.9   0.0    33.0    0.0    0.0    0.0   0.        0.     0.0   0.0
    7   2.9   0.0    25.0    0.0    0.0    0.0   0.        0.     0.0   0.0
    8   2.9   0.0    26.5    0.0    0.0    0.0   0.        0.     0.0   0.0
    9   2.7   0.0    15.5    0.0    0.0    0.0   0.        0.     0.0   0.0
   10   1.0   0.0     9.0    0.0    0.0    0.0   0.        0.     0.0   0.0
   11   3.0   0.0    18.0    0.0    0.0    0.0   0.        0.     0.0   0.0
   12   2.9   0.0    15.0    0.0    0.0    0.0   0.        0.     0.0   0.0
   13   2.6   0.0    19.5    0.0    0.0    0.0   0.        0.     0.0   0.0
   14   2.3   0.0    22.0    0.0    0.0    0.0   0.        0.     0.0   0.0
   15   2.9   0.0    21.0    0.0    0.0    0.0   0.        0.     0.0   0.0
   16   2.9   0.0    15.0    0.0    0.0    0.0   0.        0.     0.0   0.0
   17   3.1   0.0    22.0    0.0    0.0    0.0   0.        0.     0.0   0.0
   18   3.1   0.0    28.0    0.0    0.0    0.0   0.        0.     0.0   0.0
   19   2.9   0.0    20.0    0.0    0.0    0.0   0.        0.     0.0   0.0
   20   2.9   0.0    15.5    0.0    0.0    0.0   0.        0.     0.0   0.0


   MEAN 2.8   0.0    19.2    0.0    0.0    0.0   0.        0.     0.0   0.0

 STD DEV .5   0.0     6.2    0.0    0.0    0.0   0.        0.     0.0   0.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA SHOSHONI 7   DATE 17 MAY 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.3	0.0	23.5	41.0	33.0	0.0	0.	0.	0.0	0.0
2	3.2	0.0	12.0	12.0	7.0	0.0	0.	0.	0.0	0.0
3	3.3	0.0	12.0	30.0	10.0	0.0	0.	0.	0.0	0.0
4	3.2	0.0	20.0	37.0	20.0	0.0	0.	0.	0.0	0.0
5	3.2	0.0	13.0	22.0	20.0	0.0	0.	0.	0.0	0.0
6	3.3	0.0	31.0	54.0	30.0	0.0	0.	0.	0.0	0.0
7	3.3	0.0	21.0	56.0	25.0	0.0	0.	0.	0.0	0.0
8	3.2	0.0	24.0	49.0	17.0	0.0	0.	0.	0.0	0.0
9	3.2	0.0	13.0	38.0	27.0	0.0	0.	0.	0.0	0.0
10	3.1	0.0	26.0	60.0	72.0	0.0	0.	0.	0.0	0.0
11	3.2	0.0	18.0	72.0	50.0	0.0	0.	0.	0.0	0.0
12	3.2	0.0	14.0	56.0	27.0	0.0	0.	0.	0.0	0.0
13	3.2	0.0	19.0	60.0	25.0	0.0	0.	0.	0.0	0.0
14	3.1	0.0	23.0	34.0	19.0	0.0	0.	0.	0.0	0.0
15	3.1	0.0	29.0	32.0	10.0	0.0	0.	0.	0.0	0.0
16	3.1	0.0	16.0	23.0	13.0	0.0	0.	0.	0.0	0.0
17	3.3	0.0	18.0	52.0	22.0	0.0	0.	0.	0.0	0.0
18	3.3	0.0	21.0	45.0	44.0	0.0	0.	0.	0.0	0.0
19	3.3	0.0	20.0	41.0	18.0	0.0	0.	0.	0.0	0.0
20	3.2	0.0	16.0	35.0	31.0	0.0	0.	0.	0.0	0.0
MEAN	3.2	0.0	19.5	42.5	26.0	0.0	0.	0.	0.0	0.0
STD DEV	.1	0.0	5.5	15.0	15.3	0.0	0.	0.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA STUDY AREA SHOSHONI 7 DATE 01 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE		PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
	VEG.	REPR.								
1	3.4	9.1	0.0	0.0	0.0	0.0	0.	0.	0.0	2.0
2	3.4	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
3	3.3	9.0	0.0	0.0	0.0	0.0	0.	0.	0.0	.5
4	3.4	9.0	0.0	0.0	0.0	0.0	0.	0.	0.0	.5
5	3.3	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	2.0
6	3.4	9.1	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
7	3.4	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
8	3.4	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
9	3.3	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
10	3.4	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
11	3.4	9.0	0.0	0.0	0.0	0.0	0.	0.	0.0	.5
12	3.3	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
13	3.3	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
14	3.4	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
15	3.3	9.1	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
16	3.4	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	1.9
17	3.4	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
18	3.4	9.1	0.0	0.0	0.0	0.0	0.	0.	0.0	2.0
19	3.4	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
20	3.3	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
MEAN	3.4	9.1	0.0	0.0	0.0	0.0	0.	0.	0.0	1.3
STD DEV	.0	.1	0.0	0.0	0.0	0.0	0.	0.	0.0	.8

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA STUDY AREA SHOSHONI 7 DATE 16 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.4	9.4	23.5	0.0	0.0	0.0	0.	0.	.2	.8
2	3.2	0.0	12.0	0.0	0.0	0.0	0.	0.	0.0	0.0
3	3.3	0.0	6.5	0.0	0.0	0.0	0.	0.	.3	0.0
4	3.4	9.4	19.5	0.0	0.0	0.0	0.	0.	.5	.8
5	3.3	0.0	0.0	0.0	0.0	0.0	0.	0.	.4	0.0
6	3.4	9.3	3.2	0.0	0.0	0.0	0.	0.	.5	.5
7	3.4	0.0	22.0	0.0	0.0	0.0	0.	0.	.5	0.0
8	3.4	9.3	23.0	0.0	0.0	0.0	0.	0.	.4	.5
9	3.3	0.0	13.0	0.0	0.0	0.0	0.	0.	.4	0.0
10	3.4	0.0	23.5	0.0	0.0	0.0	0.	0.	.4	0.0
11	3.4	0.0	19.0	0.0	0.0	0.0	0.	0.	.4	0.0
12	3.4	9.4	11.0	0.0	0.0	0.0	0.	0.	.5	4.5
13	3.4	0.0	19.0	0.0	0.0	0.0	0.	0.	.4	0.0
14	3.4	9.4	21.0	0.0	0.0	0.0	0.	0.	.5	2.0
15	3.3	0.0	16.0	0.0	0.0	0.0	0.	0.	.3	0.0
16	3.4	0.0	15.0	0.0	0.0	0.0	0.	0.	.5	0.0
17	3.4	9.4	22.0	0.0	0.0	0.0	0.	0.	.5	2.0
18	3.4	9.3	26.5	0.0	0.0	0.0	0.	0.	.5	.8
19	3.4	9.4	22.0	0.0	0.0	0.0	0.	0.	.5	3.0
20	3.4	9.3	13.0	0.0	0.0	0.0	0.	0.	.4	.5
MEAN	3.4	9.4	17.4	0.0	0.0	0.0	0.	0.	.4	1.5
STD DEV	.1	.1	6.3	0.0	0.0	0.0	0.	0.	.1	1.3

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMISIA TRIDENTATA   STUDY AREA SHOSHONI 7          DATE 28  JUNE       1982
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  PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
  NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
         VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                  LNGTH LNGTH
*************************************************************************************
    1     3.7   9.2   24.0    0.0    0.0    0.0   0.       0.     0.0   2.4
    2     3.6   0.0   10.0    0.0    0.0    0.0   0.       0.     0.0   0.0
    3     3.7   0.0    7.0    0.0    0.0    0.0   0.       0.     0.0   0.0
    4     3.7   9.4   19.0    0.0    0.0    0.0   0.       0.     0.0   4.0
    5     3.7   0.0   10.0    0.0    0.0    0.0   0.       0.     0.0   0.0
    6     3.7   9.4   30.0    0.0    0.0    0.0   0.       0.     0.0   3.0
    7     3.7   0.0   19.5    0.0    0.0    0.0   0.       0.     0.0   0.0
    8     3.8   9.4   22.0    0.0    0.0    0.0   0.       0.     0.0   2.5
    9     3.7   0.0   16.0    0.0    0.0    0.0   0.       0.     0.0   0.0
   10     3.8   9.4   22.0    0.0    0.0    0.0   0.       0.     0.0   5.0
   11     3.7   0.0   17.0    0.0    0.0    0.0   0.       0.     0.0   0.0
   12     3.7   9.4   17.5    0.0    0.0    0.0   0.       0.     0.0   5.0
   13     3.7   0.0   18.0    0.0    0.0    0.0   0.       0.     0.0   0.0
   14     3.7   9.2   24.0    0.0    0.0    0.0   0.       0.     0.0   3.0
   15     3.7   0.0   20.0    0.0    0.0    0.0   0.       0.     0.0   0.0
   16     3.7   9.4   13.0    0.0    0.0    0.0   0.       0.     0.0   4.5
   17     3.8   9.4   17.0    0.0    0.0    0.0   0.       0.     0.0   6.0
   18     3.7   9.4   26.5    0.0    0.0    0.0   0.       0.     0.0   3.8
   19     3.8   9.4   20.0    0.0    0.0    0.0   0.       0.     0.0   5.5
   20     3.7   0.0   14.0    0.0    0.0    0.0   0.       0.     0.0   0.0


    MEAN  3.7   9.4   18.3    0.0    0.0    0.0   0.       0.     0.0   4.1

 STD DEV   .0    .1    5.7    0.0    0.0    0.0   0.       0.     0.0   1.2

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA SHOSHONI 7   DATE 10 JULY 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.3	9.4	0.0	0.0	0.0	0.0	0.	0.	1.0	4.5
2	3.5	0.0	0.0	0.0	0.0	0.0	0.	0.	.5	0.0
3	3.9	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
4	4.0	9.5	0.0	0.0	0.0	0.0	0.	0.	.5	5.0
5	3.9	0.0	0.0	0.0	0.0	0.0	0.	0.	.5	0.0
6	3.9	9.4	0.0	0.0	0.0	0.0	0.	0.	.5	4.5
7	3.9	9.4	0.0	0.0	0.0	0.0	0.	0.	.5	3.5
8	3.9	9.5	0.0	0.0	0.0	0.0	0.	0.	.5	3.5
9	3.8	0.0	0.0	0.0	0.0	0.0	0.	0.	.5	0.0
10	3.8	9.5	0.0	0.0	0.0	0.0	0.	0.	.5	4.0
11	3.9	0.0	0.0	0.0	0.0	0.0	0.	0.	.5	0.0
12	3.9	9.5	0.0	0.0	0.0	0.0	0.	0.	.5	5.0
13	3.9	9.4	0.0	0.0	0.0	0.0	0.	0.	.5	3.0
14	3.8	9.4	0.0	0.0	0.0	0.0	0.	0.	.5	4.0
15	3.8	9.4	0.0	0.0	0.0	0.0	0.	0.	.5	3.5
16	3.9	9.5	0.0	0.0	0.0	0.0	0.	0.	.5	4.0
17	3.8	9.4	0.0	0.0	0.0	0.0	0.	0.	.5	3.0
18	4.0	9.5	0.0	0.0	0.0	0.0	0.	0.	.7	5.5
19	3.8	9.5	0.0	0.0	0.0	0.0	0.	0.	.5	5.0
20	3.7	9.4	0.0	0.0	0.0	0.0	0.	0.	.3	1.0
MEAN	3.9	9.4	0.0	0.0	0.0	0.0	0.	0.	.5	3.9
STD DEV	.1	.1	0.0	0.0	0.0	0.0	0.	0.	.1	1.1

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMISIA TRIDENTATA   STUDY AREA SHOSHONI 7          DATE 25  JULY       1982
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 PLANT PHENOLOGICAL   PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE    HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
        VEG.  REPR.                               CLASS  PERCENT  TWIG  STALK
                                                                  LNGTH LNGTH
*********************************************************************************
   1     4.0   9.5    23.0    0.0    0.0    0.0   0.       0.     0.0   4.0
   2     3.9   0.0    11.0    0.0    0.0    0.0   0.       0.     0.0   0.0
   3     3.9   0.0     6.5    0.0    0.0    0.0   0.       0.     0.0   0.0
   4     4.0   9.5    20.5    0.0    0.0    0.0   0.       0.     0.0   6.0
   5     3.9   0.0     9.5    0.0    0.0    0.0   0.       0.     0.0   0.0
   6     4.0   9.5    29.0    0.0    0.0    0.0   0.       0.     0.0   4.5
   7     4.0   9.5    20.0    0.0    0.0    0.0   0.       0.     0.0   5.0
   8     4.0   9.5    26.0    0.0    0.0    0.0   0.       0.     0.0   5.5
   9     3.9   0.0    13.5    0.0    0.0    0.0   0.       0.     0.0   0.0
  10     4.0   9.5    21.0    0.0    0.0    0.0   0.       0.     0.0   5.0
  11     4.0   0.0    17.0    0.0    0.0    0.0   0.       0.     0.0   0.0
  12     4.0   9.5    14.0    0.0    0.0    0.0   0.       0.     0.0   5.5
  13     4.0   9.5    16.0    0.0    0.0    0.0   0.       0.     0.0   3.5
  14     4.0   9.5    25.5    0.0    0.0    0.0   0.       0.     0.0   4.5
  15     3.9   9.5    18.0    0.0    0.0    0.0   0.       0.     0.0   4.0
  16     4.0   9.5    15.0    0.0    0.0    0.0   0.       0.     0.0   6.0
  17     4.0   0.0    19.0    0.0    0.0    0.0   0.       0.     0.0   0.0
  18     4.1   9.5    26.5    0.0    0.0    0.0   0.       0.     0.0   8.5
  19     4.0   9.5    27.0    0.0    0.0    0.0   0.       0.     0.0   5.5
  20     4.0   9.4    15.0    0.0    0.0    0.0   0.       0.     0.0   2.0


   MEAN  4.0   9.5    18.7    0.0    0.0    0.0   0.       0.     0.0   5.0

STD DEV   .1    .0     6.3    0.0    0.0    0.0   0.       0.     0.0   1.5

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
```

ARTEMISIA TRIDENTATA   STUDY AREA SHOSHONI 7   DATE 8 AUGUST 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.4	9.7	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
2	3.8	0.0	0.0	0.0	0.0	0.0	0.	0.	.8	5.0
3	3.9	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
4	4.1	9.7	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
5	4.0	9.7	0.0	0.0	0.0	0.0	0.	0.	.5	4.0
6	4.0	9.8	0.0	0.0	0.0	0.0	0.	0.	.3	4.0
7	4.0	9.7	0.0	0.0	0.0	0.0	0.	0.	.2	4.0
8	4.1	9.8	0.0	0.0	0.0	0.0	0.	0.	.3	4.0
9	3.9	0.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
10	4.2	9.7	0.0	0.0	0.0	0.0	0.	0.	.3	4.5
11	4.2	0.0	0.0	0.0	0.0	0.0	0.	0.	.4	0.0
12	4.1	9.7	0.0	0.0	0.0	0.0	0.	0.	.3	6.0
13	4.1	9.8	0.0	0.0	0.0	0.0	0.	0.	.3	4.0
14	4.2	9.8	0.0	0.0	0.0	0.0	0.	0.	.3	4.0
15	4.2	0.0	0.0	0.0	0.0	0.0	0.	0.	.4	0.0
16	4.2	9.8	0.0	0.0	0.0	0.0	0.	0.	.4	6.0
17	4.1	9.7	0.0	0.0	0.0	0.0	0.	0.	.3	3.5
18	4.3	9.7	0.0	0.0	0.0	0.0	0.	0.	.6	4.5
19	4.1	9.8	0.0	0.0	0.0	0.0	0.	0.	.3	6.0
20	4.1	9.7	0.0	0.0	0.0	0.0	0.	0.	.3	3.0
MEAN	4.1	9.7	0.0	0.0	0.0	0.0	0.	0.	.4	4.5
STD DEV	.1	.1	0.0	0.0	0.0	0.0	0.	0.	.1	.9

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMISIA TRIDENTATA   STUDY AREA SHOSHONI 7          DATE 28  AUGUST   1982
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW  NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE     BRANCH  VEG. SEED
        VEG.  REPR.                              CLASS   PERCENT TWIG STALK
                                                                 LNGTH LNGTH
*****************************************************************************
    1     4.3   9.8    0.0    0.0    0.0    0.0  0.        0.      .5  4.0
    2     3.9   0.0    0.0    0.0    0.0    0.0  0.        0.     0.0  0.0
    3     4.2   0.0    0.0    0.0    0.0    0.0  0.        0.      .3  0.0
    4     4.3   9.8    0.0    0.0    0.0    0.0  0.        0.      .9  6.5
    5     4.2   0.0    0.0    0.0    0.0    0.0  0.        0.      .3  0.0
    6     4.3   9.8    0.0    0.0    0.0    0.0  0.        0.      .9  4.5
    7     4.2   9.8    0.0    0.0    0.0    0.0  0.        0.      .3  4.0
    8     4.2   9.8    0.0    0.0    0.0    0.0  0.        0.      .3  4.0
    9     4.3   0.0    0.0    0.0    0.0    0.0  0.        0.      .4  0.0
   10     4.3   9.8    0.0    0.0    0.0    0.0  0.        0.      .7  4.5
   11     4.3   0.0    0.0    0.0    0.0    0.0  0.        0.      .5  0.0
   12     4.2   9.9    0.0    0.0    0.0    0.0  0.        0.      .3  6.0
   13     4.3   9.8    0.0    0.0    0.0    0.0  0.        0.      .6  4.0
   14     4.2   9.8    0.0    0.0    0.0    0.0  0.        0.      .3  5.0
   15     4.2   9.8    0.0    0.0    0.0    0.0  0.        0.      .3  4.0
   16     4.5   9.8    0.0    0.0    0.0    0.0  0.        0.      .9  5.0
   17     4.3   9.8    0.0    0.0    0.0    0.0  0.        0.      .4  3.5
   18     4.3   9.8    0.0    0.0    0.0    0.0  0.        0.      .4  5.0
   19     4.3   9.8    0.0    0.0    0.0    0.0  0.        0.      .4  6.0
   20     4.2   9.7    0.0    0.0    0.0    0.0  0.        0.      .2  3.0


   MEAN   4.3   9.8    0.0    0.0    0.0    0.0  0.        0.      .5  4.6

STD DEV    .1    .0    0.0    0.0    0.0    0.0  0.        0.      .2  1.0

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA    STUDY AREA SHOSHONI 7          DATE 19  SEPT      1982
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW  NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG. SEED
        VEG.  REPR.                              CLASS  PERCENT  TWIG STALK
                                                                 LNGTH LNGTH
*****************************************************************************
   1    5.0  11.0    0.0    0.0    0.0    0.0    0.      0.      0.0  0.0
   2    5.1   0.0    0.0    0.0    0.0    0.0    0.      0.      0.0  0.0
   3    5.1   0.0    0.0    0.0    0.0    0.0    0.      0.      0.0  0.0
   4    5.1  10.5    0.0    0.0    0.0    0.0    0.      0.      0.0  0.0
   5    5.1   0.0    0.0    0.0    0.0    0.0    0.      0.      0.0  0.0
   6    5.1  10.6    0.0    0.0    0.0    0.0    0.      0.      0.0  0.0
   7    5.1  10.3    0.0    0.0    0.0    0.0    0.      0.      0.0  0.0
   8    5.2  11.0    0.0    0.0    0.0    0.0    0.      0.      0.0  0.0
   9    5.1   0.0    0.0    0.0    0.0    0.0    0.      0.      0.0  0.0
  10    5.1  10.8    0.0    0.0    0.0    0.0    0.      0.      0.0  0.0
  11    5.2   0.0    0.0    0.0    0.0    0.0    0.      0.      0.0  0.0
  12    5.1  10.7    0.0    0.0    0.0    0.0    0.      0.      0.0  0.0
  13    5.1  10.4    0.0    0.0    0.0    0.0    0.      0.      0.0  0.0
  14    5.1  10.8    0.0    0.0    0.0    0.0    0.      0.      0.0  0.0
  15    5.0   0.0    0.0    0.0    0.0    0.0    0.      0.      0.0  0.0
  16    5.1  10.3    0.0    0.0    0.0    0.0    0.      0.      0.0  0.0
  17    5.1  10.6    0.0    0.0    0.0    0.0    0.      0.      0.0  0.0
  18    5.2  11.0    0.0    0.0    0.0    0.0    0.      0.      0.0  0.0
  19    5.1  10.7    0.0    0.0    0.0    0.0    0.      0.      0.0  0.0
  20    5.0   0.0    0.0    0.0    0.0    0.0    0.      0.      0.0  0.0


   MEAN 5.1  10.7    0.0    0.0    0.0    0.0    0.      0.      0.0  0.0

STD DEV  .1    .2    0.0    0.0    0.0    0.0    0.      0.      0.0  0.0

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA SWEETWATER         DATE 01  MAY       1982
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  PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
  NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
         VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                  LNGTH LNGTH
*****************************************************************************
     1    2.5   0.0   22.0    0.0    0.0    0.0   0.        0.    0.0   0.0
     2    2.5   0.0   37.0    0.0    0.0    0.0   0.        0.    0.0   0.0
     3    2.5   0.0   23.0    0.0    0.0    0.0   0.        0.    0.0   0.0
     4    2.4   0.0   45.0    0.0    0.0    0.0   0.        0.    0.0   0.0
     5    2.6   0.0   34.0    0.0    0.0    0.0   0.        0.    0.0   0.0
     6    2.2   0.0   15.0    0.0    0.0    0.0   0.        0.    0.0   0.0
     7    2.4   0.0   20.0    0.0    0.0    0.0   0.        0.    0.0   0.0
     8    2.2   0.0    6.0    0.0    0.0    0.0   0.        0.    0.0   0.0
     9    2.4   0.0   18.0    0.0    0.0    0.0   0.        0.    0.0   0.0
    10    2.5   0.0   30.0    0.0    0.0    0.0   0.        0.    0.0   0.0
    11    2.4   0.0   42.0    0.0    0.0    0.0   0.        0.    0.0   0.0
    12    2.3   0.0   13.0    0.0    0.0    0.0   0.        0.    0.0   0.0
    13    2.6   0.0   13.0    0.0    0.0    0.0   0.        0.    0.0   0.0
    14    2.0   0.0    7.0    0.0    0.0    0.0   0.        0.    0.0   0.0
    15    2.2   0.0   36.0    0.0    0.0    0.0   0.        0.    0.0   0.0
    16    2.3   0.0   33.0    0.0    0.0    0.0   0.        0.    0.0   0.0
    17    2.3   0.0   10.0    0.0    0.0    0.0   0.        0.    0.0   0.0
    18    2.4   0.0   33.0    0.0    0.0    0.0   0.        0.    0.0   0.0
    19    2.3   0.0   18.0    0.0    0.0    0.0   0.        0.    0.0   0.0
    20    2.4   0.0   30.0    0.0    0.0    0.0   0.        0.    0.0   0.0


     MEAN  2.4  0.0   24.3    0.0    0.0    0.0   0.        0.    0.0   0.0

 STD DEV    .1  0.0   11.8    0.0    0.0    0.0   0.        0.    0.0   0.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA SWEETWATER        DATE 19  MAY       1982
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
        VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                 LNGTH LNGTH
*****************************************************************************
    1    3.2   0.0    19.0   55.0   34.0   0.0   0.       0.     0.0   0.0
    2    3.3   0.0    32.0   88.0   68.0   0.0   0.       0.     0.0   0.0
    3    3.2   0.0    30.0   59.0   35.0   0.0   0.       0.     0.0   0.0
    4    3.3   0.0    43.0   63.0   38.0   0.0   0.       0.     0.0   0.0
    5    3.2   0.0    21.0   14.0   10.0   0.0   0.       0.     0.0   0.0
    6    3.3   0.0    22.0   28.0   31.0   0.0   0.       0.     0.0   0.0
    7    3.3   0.0    21.0   36.0   28.0   0.0   0.       0.     0.0   0.0
    8    3.2   0.0     7.0   24.0   19.0   0.0   0.       0.     0.0   0.0
    9    3.2   0.0    16.0   81.0   51.0   0.0   0.       0.     0.0   0.0
   10    3.3   0.0    33.0   65.0   66.0   0.0   0.       0.     0.0   0.0
   11    3.3   0.0    25.0   64.0   83.0   0.0   0.       0.     0.0   0.0
   12    3.2   0.0    18.0   17.0   16.0   0.0   0.       0.     0.0   0.0
   13    3.2   0.0    17.0   42.0   22.0   0.0   0.       0.     0.0   0.0
   14    3.3   0.0     8.0   13.0    6.0   0.0   0.       0.     0.0   0.0
   15    3.3   0.0    39.0   94.0   93.0   0.0   0.       0.     0.0   0.0
   16    3.3   0.0    30.0   38.0   20.0   0.0   0.       0.     0.0   0.0
   17    3.2   0.0     9.0   79.0   44.0   0.0   0.       0.     0.0   0.0
   18    3.2   0.0    33.0   97.0   79.0   0.0   0.       0.     0.0   0.0
   19    3.2   0.0    19.0   98.0   50.0   0.0   0.       0.     0.0   0.0
   20    3.2   0.0    30.0   16.0    8.0   0.0   0.       0.     0.0   0.0


   MEAN  3.2   0.0    23.6   53.6   40.1   0.0   0.       0.     0.0   0.0

 STD DEV  .1   0.0    10.0   29.6   26.1   0.0   0.       0.     0.0   0.0

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
 ARTEMISIA TRIDENTATA   STUDY AREA SWEETWATER          DATE 03  JUNE      1982
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  PLANT PHENOLOGICAL   PLANT   PLANT   PLANT   PLANT   PLANT    DEAD     NEW   NEW
  NO.   STAGE SCORE    HGHT    LNGTH   WIDTH   DIAM    AGE      BRANCH   VEG.  SEED
        VEG.  REPR.                                    CLASS    PERCENT  TWIG  STALK
                                                                         LNGTH LNGTH
*****************************************************************************************
      1     3.4    9.0     22.0     0.0     0.0     0.0    0.        0.       .5   1.0
      2     3.3    9.0     34.0     0.0     0.0     0.0    0.        0.       .4    .5
      3     3.3    0.0     28.0     0.0     0.0     0.0    0.        0.       .4   0.0
      4     3.4    9.0     51.0     0.0     0.0     0.0    0.        0.       .6    .8
      5     3.3    0.0     26.5     0.0     0.0     0.0    0.        0.       .4   0.0
      6     3.3    0.0     17.0     0.0     0.0     0.0    0.        0.       .4   0.0
      7     3.4    9.0     20.0     0.0     0.0     0.0    0.        0.       .5    .5
      8     3.3    0.0     10.0     0.0     0.0     0.0    0.        0.       .4   0.0
      9     3.4    9.0     25.0     0.0     0.0     0.0    0.        0.       .6   1.0
     10     3.4    9.0     34.0     0.0     0.0     0.0    0.        0.       .5   1.0
     11     3.3    0.0     16.0     0.0     0.0     0.0    0.        0.       .3   0.0
     12     3.3    9.0     18.0     0.0     0.0     0.0    0.        0.       .4    .7
     13     3.3    0.0      9.0     0.0     0.0     0.0    0.        0.       .3   0.0
     14     3.4    0.0     42.0     0.0     0.0     0.0    0.        0.       .5   0.0
     15     3.3    9.0     29.0     0.0     0.0     0.0    0.        0.       .4    .4
     16     3.2    0.0     14.0     0.0     0.0     0.0    0.        0.      0.0   0.0
     17     3.4    0.0     36.5     0.0     0.0     0.0    0.        0.       .5   0.0
     18     3.3    0.0     25.0     0.0     0.0     0.0    0.        0.       .4   0.0
     19     3.4    0.0     15.0     0.0     0.0     0.0    0.        0.       .6   0.0
     20     3.4    0.0      0.0     0.0     0.0     0.0    0.        0.      0.0   0.0


   MEAN     3.3    9.0     24.8     0.0     0.0     0.0    0.        0.       .5    .7

 STD DEV     .1    0.0     11.1     0.0     0.0     0.0    0.        0.       .1    .3

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA SWEETWATER   DATE 16 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE VEG.	SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.6	9.2	22.0	0.0	0.0	0.0	0.	0.	0.0	3.5
2	3.5	9.1	33.0	0.0	0.0	0.0	0.	0.	0.0	1.5
3	3.6	9.1	24.5	0.0	0.0	0.0	0.	0.	0.0	1.0
4	3.6	9.2	43.0	0.0	0.0	0.0	0.	0.	0.0	2.5
5	3.5	0.0	18.0	0.0	0.0	0.0	0.	0.	0.0	0.0
6	3.6	9.2	25.0	0.0	0.0	0.0	0.	0.	0.0	2.5
7	3.6	9.2	22.5	0.0	0.0	0.0	0.	0.	0.0	3.5
8	3.5	0.0	8.0	0.0	0.0	0.0	0.	0.	0.0	0.0
9	3.5	9.2	21.0	0.0	0.0	0.0	0.	0.	0.0	4.5
10	3.5	9.2	31.0	0.0	0.0	0.0	0.	0.	0.0	4.0
11	3.5	9.2	35.0	0.0	0.0	0.0	0.	0.	0.0	2.5
12	3.6	0.0	16.5	0.0	0.0	0.0	0.	0.	0.0	0.0
13	3.5	9.2	18.0	0.0	0.0	0.0	0.	0.	0.0	3.0
14	3.6	0.0	11.5	0.0	0.0	0.0	0.	0.	0.0	0.0
15	3.5	9.2	40.0	0.0	0.0	0.0	0.	0.	0.0	2.5
16	3.5	9.2	31.0	0.0	0.0	0.0	0.	0.	0.0	2.5
17	3.6	0.0	11.5	0.0	0.0	0.0	0.	0.	0.0	0.0
18	3.6	9.2	35.0	0.0	0.0	0.0	0.	0.	0.0	2.5
19	3.6	9.1	21.0	0.0	0.0	0.0	0.	0.	0.0	1.5
20	3.6	9.1	15.5	0.0	0.0	0.0	0.	0.	0.0	1.0
MEAN	3.6	9.2	24.2	0.0	0.0	0.0	0.	0.	0.0	2.6
STD DEV	.1	.0	9.8	0.0	0.0	0.0	0.	0.	0.0	1.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMISIA TRIDENTATA   STUDY AREA SWEETWATER          DATE 28  JUNE      1982
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
        VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                 LNGTH LNGTH
************************************************************************************
   1     3.6   0.0    0.0    0.0    0.0    0.0    0.       0.     0.0   0.0
   2     3.6   9.3    0.0    0.0    0.0    0.0    0.       0.      .5   0.0
   3     3.6   0.0    0.0    0.0    0.0    0.0    0.       0.      .9   4.0
   4     3.6   9.4    0.0    0.0    0.0    0.0    0.       0.      .5   0.0
   5     3.6   9.4    0.0    0.0    0.0    0.0    0.       0.      .5   4.0
   6     3.6   0.0    0.0    0.0    0.0    0.0    0.       0.      .5   3.0
   7     3.6   9.4    0.0    0.0    0.0    0.0    0.       0.      .5   4.0
   8     3.6   0.0    0.0    0.0    0.0    0.0    0.       0.      .5   0.0
   9     3.6   9.4    0.0    0.0    0.0    0.0    0.       0.      .5   7.0
  10     3.6   9.4    0.0    0.0    0.0    0.0    0.       0.      .9   5.0
  11     3.7   9.4    0.0    0.0    0.0    0.0    0.       0.      .8   3.6
  12     3.4   9.3    0.0    0.0    0.0    0.0    0.       0.      .4   2.5
  13     3.6   9.3    0.0    0.0    0.0    0.0    0.       0.      .9   3.0
  14     3.4   0.0    0.0    0.0    0.0    0.0    0.       0.      .4   0.0
  15     3.6   0.0    0.0    0.0    0.0    0.0    0.       0.     1.0   0.0
  16     3.6   9.4    0.0    0.0    0.0    0.0    0.       0.     1.0   5.0
  17     3.4   0.0    0.0    0.0    0.0    0.0    0.       0.      .4   0.0
  18     3.6   9.3    0.0    0.0    0.0    0.0    0.       0.      .6   3.0
  19     3.4   9.3    0.0    0.0    0.0    0.0    0.       0.      .4   2.5
  20     3.6   0.0    0.0    0.0    0.0    0.0    0.       0.      .2   0.0


   MEAN  3.6   9.4    0.0    0.0    0.0    0.0    0.       0.      .6   3.9

STD DEV   .1    .1    0.0    0.0    0.0    0.0    0.       0.      .2   1.3

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA SWEETWATER          DATE 10  JULY     1982
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW  NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG. SEED
        VEG.  REPR.                              CLASS  PERCENT  TWIG STALK
                                                                 LNGTH LNGTH
*******************************************************************************
    1    3.7   9.6    0.0    0.0    0.0    0.0   0.      0.       .7   8.0
    2    3.7   9.6    0.0    0.0    0.0    0.0   0.      0.       .4   4.0
    3    3.8   9.7    0.0    0.0    0.0    0.0   0.      0.       .5   5.0
    4    3.7   9.6    0.0    0.0    0.0    0.0   0.      0.       .5   8.0
    5    3.6   9.6    0.0    0.0    0.0    0.0   0.      0.       .5   7.0
    6    3.6   0.0    0.0    0.0    0.0    0.0   0.      0.       .6   0.0
    7    3.8   9.5    0.0    0.0    0.0    0.0   0.      0.       .6  11.0
    8    3.6   0.0    0.0    0.0    0.0    0.0   0.      0.       .3   0.0
    9    3.6   9.6    0.0    0.0    0.0    0.0   0.      0.       .4  12.0
   10    3.7   9.6    0.0    0.0    0.0    0.0   0.      0.       .4   7.0
   11    3.6   9.6    0.0    0.0    0.0    0.0   0.      0.       .8   7.0
   12    3.6   9.5    0.0    0.0    0.0    0.0   0.      0.       .5   3.0
   13    3.6   9.6    0.0    0.0    0.0    0.0   0.      0.       .4   5.0
   14    3.6   0.0    0.0    0.0    0.0    0.0   0.      0.       .4   0.0
   15    3.6   0.0    0.0    0.0    0.0    0.0   0.      0.       .5   0.0
   16    3.6   9.6    0.0    0.0    0.0    0.0   0.      0.       .4   7.0
   17    3.7   0.0    0.0    0.0    0.0    0.0   0.      0.       .3   0.0
   18    3.7   9.7    0.0    0.0    0.0    0.0   0.      0.       .5   8.0
   19    3.6   9.6    0.0    0.0    0.0    0.0   0.      0.       .4   5.0
   20    3.6   0.0    0.0    0.0    0.0    0.0   0.      0.       .4   0.0


  MEAN   3.7   9.6    0.0    0.0    0.0    0.0   0.      0.       .5   6.9

STD DEV   .1    .1    0.0    0.0    0.0    0.0   0.      0.       .1   2.5

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
 ARTEMISIA TRIDENTATA   STUDY AREA SWEETWATER          DATE 25  JULY      1982
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  PLANT PHENOLOGICAL   PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
  NO.   STAGE SCORE    HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
         VEG.  REPR.                               CLASS  PERCENT  TWIG  STALK
                                                                   LNGTH LNGTH
**************************************************************************************
    1    4.1   9.7     29.0    0.0    0.0    0.0   0.        0.      .6   8.0
    2    4.0   9.6     31.0    0.0    0.0    0.0   0.        0.      .4   5.0
    3    4.0   9.7     31.0    0.0    0.0    0.0   0.        0.      .4   3.7
    4    4.2   9.6     47.0    0.0    0.0    0.0   0.        0.      .6   6.7
    5    4.1   9.7     28.0    0.0    0.0    0.0   0.        0.      .4   5.0
    6    4.1   9.7     17.0    0.0    0.0    0.0   0.        0.      .4   5.0
    7    4.2   9.7     28.0    0.0    0.0    0.0   0.        0.      .8   6.0
    8    4.2   0.0      9.0    0.0    0.0    0.0   0.        0.      .6   0.0
    9    4.4   9.6     30.7    0.0    0.0    0.0   0.        0.     1.7   7.5
   10    4.4   9.6     40.0    0.0    0.0    0.0   0.        0.     1.2   8.0
   11    4.3   9.6     46.5    0.0    0.0    0.0   0.        0.     1.0   6.0
   12    4.0   0.0     13.0    0.0    0.0    0.0   0.        0.      .3   0.0
   13    4.2   9.6     22.0    0.0    0.0    0.0   0.        0.      .8   7.0
   14    4.0   9.4     13.0    0.0    0.0    0.0   0.        0.      .3   2.0
   15    4.6   0.0     40.0    0.0    0.0    0.0   0.        0.     2.0   0.0
   16    4.3   9.6     35.0    0.0    0.0    0.0   0.        0.     1.0   7.0
   17    4.3   0.0     13.0    0.0    0.0    0.0   0.        0.      .9   0.0
   18    4.3   9.5     32.0    0.0    0.0    0.0   0.        0.     1.0   4.5
   19    4.6   9.6     24.0    0.0    0.0    0.0   0.        0.     2.0   8.0
   20    4.1   0.0     18.0    0.0    0.0    0.0   0.        0.      .5   0.0

   MEAN  4.2   9.6     27.4    0.0    0.0    0.0   0.        0.      .8   6.0

 STD DEV  .2    .1     11.2    0.0    0.0    0.0   0.        0.      .5   1.8

  0.0 = NOT RECORDED

  MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA SWEETWATER        DATE 08  AUGUST   1982
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
        VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                 LNGTH LNGTH
*************************************************************************************
   1     4.4   9.6    0.0    0.0    0.0    0.0    0.      0.     1.0   8.0
   2     4.8   9.6    0.0    0.0    0.0    0.0    0.      0.      .5   6.0
   3     4.4   9.5    0.0    0.0    0.0    0.0    0.      0.      .5   4.0
   4     4.4   9.7    0.0    0.0    0.0    0.0    0.      0.      .7   7.0
   5     4.4   9.7    0.0    0.0    0.0    0.0    0.      0.      .5   7.0
   6     4.4   9.6    0.0    0.0    0.0    0.0    0.      0.      .5   3.0
   7     4.4   9.6    0.0    0.0    0.0    0.0    0.      0.     1.0   7.0
   8     4.7   0.0    0.0    0.0    0.0    0.0    0.      0.      .3   0.0
   9     4.4   9.6    0.0    0.0    0.0    0.0    0.      0.      .5   8.0
  10     4.4   9.7    0.0    0.0    0.0    0.0    0.      0.     1.0   9.0
  11     4.4   9.7    0.0    0.0    0.0    0.0    0.      0.      .7   9.0
  12     4.4   9.6    0.0    0.0    0.0    0.0    0.      0.      .5   5.0
  13     4.4   9.7    0.0    0.0    0.0    0.0    0.      0.      .5   7.0
  14     4.4   0.0    0.0    0.0    0.0    0.0    0.      0.      .3   0.0
  15     4.4   0.0    0.0    0.0    0.0    0.0    0.      0.      .6   0.0
  16     4.4   0.0    0.0    0.0    0.0    0.0    0.      0.     1.0   0.0
  17     4.8   0.0    0.0    0.0    0.0    0.0    0.      0.      .2   0.0
  18     4.8   9.5    0.0    0.0    0.0    0.0    0.      0.      .5   5.0
  19     4.8   9.6    0.0    0.0    0.0    0.0    0.      0.      .5   6.0
  20     4.4   0.0    0.0    0.0    0.0    0.0    0.      0.      .4   0.0


    MEAN 4.5   9.6    0.0    0.0    0.0    0.0    0.      0.      .6   6.5

 STD DEV  .2    .1    0.0    0.0    0.0    0.0    0.      0.      .2   1.8

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA SWEETWATER          DATE 27  AUGUST   1982
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD   NEW  NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH  VEG. SEED
       VEG.  REPR.                               CLASS  PERCENT TWIG STALK
                                                                LNGTH LNGTH
**************************************************************************************
   1    4.7  10.0     0.0    0.0    0.0    0.0   0.       0.    2.0   8.0
   2    4.5   9.6     0.0    0.0    0.0    0.0   0.       0.     .8   5.0
   3    4.6   9.8     0.0    0.0    0.0    0.0   0.       0.    1.0   4.0
   4    4.6   9.8     0.0    0.0    0.0    0.0   0.       0.    1.0   6.0
   5    4.5   9.8     0.0    0.0    0.0    0.0   0.       0.     .8   6.0
   6    4.5   9.6     0.0    0.0    0.0    0.0   0.       0.     .8   5.0
   7    4.7   9.8     0.0    0.0    0.0    0.0   0.       0.    2.0   8.0
   8    4.6   0.0     0.0    0.0    0.0    0.0   0.       0.    1.0   0.0
   9    4.7   9.8     0.0    0.0    0.0    0.0   0.       0.    2.0   8.0
  10    4.6   9.8     0.0    0.0    0.0    0.0   0.       0.    1.0   6.0
  11    4.7   9.8     0.0    0.0    0.0    0.0   0.       0.    2.0   6.5
  12    4.5   9.8     0.0    0.0    0.0    0.0   0.       0.     .8   5.0
  13    4.6   9.5     0.0    0.0    0.0    0.0   0.       0.    1.5   4.0
  14    4.5   0.0     0.0    0.0    0.0    0.0   0.       0.     .9   0.0
  15    4.7   0.0     0.0    0.0    0.0    0.0   0.       0.    2.5   0.0
  16    4.6   9.5     0.0    0.0    0.0    0.0   0.       0.    1.5   5.0
  17    4.4   0.0     0.0    0.0    0.0    0.0   0.       0.     .5   0.0
  18    4.6   9.8     0.0    0.0    0.0    0.0   0.       0.    1.0   5.0
  19    4.4   9.8     0.0    0.0    0.0    0.0   0.       0.     .8   5.0
  20    4.5   0.0     0.0    0.0    0.0    0.0   0.       0.     .9   0.0


   MEAN  4.6  9.7     0.0    0.0    0.0    0.0   0.       0.    1.2   5.8

STD DEV   .1   .1     0.0    0.0    0.0    0.0   0.       0.     .6   1.3

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA SWEETWATER          DATE 10  SEPT      1982
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 PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
 NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
        VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                 LNGTH LNGTH
*************************************************************************************
   1     5.0  10.0    0.0    0.0    0.0    0.0   0.       0.      .5   6.0
   2     4.5   9.8    0.0    0.0    0.0    0.0   0.       0.      .3   5.0
   3     4.7   0.0    0.0    0.0    0.0    0.0   0.       0.      .8   0.0
   4     4.6  10.0    0.0    0.0    0.0    0.0   0.       0.      .8   6.0
   5     4.6  10.0    0.0    0.0    0.0    0.0   0.       0.      .7   6.0
   6     4.6   9.8    0.0    0.0    0.0    0.0   0.       0.      .8   4.0
   7     4.6   9.9    0.0    0.0    0.0    0.0   0.       0.      .8   7.0
   8     5.0   0.0    0.0    0.0    0.0    0.0   0.       0.      .3   0.0
   9     4.7  10.2    0.0    0.0    0.0    0.0   0.       0.     1.3   8.0
  10     4.7  10.2    0.0    0.0    0.0    0.0   0.       0.     1.0   5.0
  11     4.7  10.2    0.0    0.0    0.0    0.0   0.       0.     1.0   5.0
  12     5.0  10.0    0.0    0.0    0.0    0.0   0.       0.      .3   6.0
  13     5.0  10.0    0.0    0.0    0.0    0.0   0.       0.      .3   5.0
  14     4.6  10.0    0.0    0.0    0.0    0.0   0.       0.      .8   2.0
  15     4.6   0.0    0.0    0.0    0.0    0.0   0.       0.     1.0   0.0
  16     4.7   9.9    0.0    0.0    0.0    0.0   0.       0.     1.0   4.0
  17     5.0   0.0    0.0    0.0    0.0    0.0   0.       0.     0.0   0.0
  18     4.6   9.9    0.0    0.0    0.0    0.0   0.       0.      .8   5.0
  19     5.0   9.9    0.0    0.0    0.0    0.0   0.       0.      .3   6.0
  20     4.6   0.0    0.0    0.0    0.0    0.0   0.       0.     0.0   1.0


   MEAN  4.7  10.0    0.0    0.0    0.0    0.0   0.       0.      .7   5.1

STD DEV   .2    .1    0.0    0.0    0.0    0.0   0.       0.      .3   1.7

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA UPPER GOVT   DATE 29 APRIL 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.0	0.0	40.5	0.0	0.0	0.0	0.	0.	0.0	0.0
2	3.1	0.0	24.5	0.0	0.0	0.0	0.	0.	0.0	0.0
3	3.0	0.0	26.0	0.0	0.0	0.0	0.	0.	0.0	0.0
4	2.9	0.0	22.0	0.0	0.0	0.0	0.	0.	0.0	0.0
5	3.0	0.0	29.0	0.0	0.0	0.0	0.	0.	0.0	0.0
6	2.9	0.0	34.0	0.0	0.0	0.0	0.	0.	0.0	0.0
7	2.2	0.0	22.0	0.0	0.0	0.0	0.	0.	0.0	0.0
8	3.1	0.0	19.0	0.0	0.0	0.0	0.	0.	0.0	0.0
9	3.0	0.0	32.0	0.0	0.0	0.0	0.	0.	0.0	0.0
10	3.0	0.0	35.0	0.0	0.0	0.0	0.	0.	0.0	0.0
11	2.9	0.0	33.0	0.0	0.0	0.0	0.	0.	0.0	0.0
12	2.0	0.0	16.0	0.0	0.0	0.0	0.	0.	0.0	0.0
13	2.8	0.0	34.5	0.0	0.0	0.0	0.	0.	0.0	0.0
14	2.9	0.0	37.0	0.0	0.0	0.0	0.	0.	0.0	0.0
15	3.0	0.0	23.0	0.0	0.0	0.0	0.	0.	0.0	0.0
16	2.9	0.0	26.0	0.0	0.0	0.0	0.	0.	0.0	0.0
17	3.0	0.0	36.0	0.0	0.0	0.0	0.	0.	0.0	0.0
18	2.9	0.0	41.5	0.0	0.0	0.0	0.	0.	0.0	0.0
19	3.0	0.0	21.0	0.0	0.0	0.0	0.	0.	0.0	0.0
20	3.0	0.0	38.5	0.0	0.0	0.0	0.	0.	0.0	0.0
MEAN	2.9	0.0	29.5	0.0	0.0	0.0	0.	0.	0.0	0.0
STD DEV	.3	0.0	7.6	0.0	0.0	0.0	0.	0.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA   STUDY AREA UPPER GOVT   DATE 19 MAY 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.3	0.0	28.0	44.0	15.0	0.0	0.	0.	0.0	0.0
2	3.2	0.0	29.0	59.0	21.0	0.0	0.	0.	0.0	0.0
3	3.2	0.0	26.0	47.0	32.0	0.0	0.	0.	0.0	0.0
4	3.2	0.0	26.0	23.0	17.0	0.0	0.	0.	0.0	0.0
5	3.3	0.0	34.0	58.0	24.0	0.0	0.	0.	0.0	0.0
6	3.2	0.0	35.0	49.0	31.0	0.0	0.	0.	0.0	0.0
7	3.2	0.0	22.0	34.0	24.0	0.0	0.	0.	0.0	0.0
8	3.2	0.0	21.0	22.0	15.0	0.0	0.	0.	0.0	0.0
9	3.3	0.0	33.0	51.0	43.0	0.0	0.	0.	0.0	0.0
10	3.2	0.0	32.0	46.0	33.0	0.0	0.	0.	0.0	0.0
11	3.3	0.0	33.0	43.0	31.0	0.0	0.	0.	0.0	0.0
12	3.2	0.0	17.0	18.0	9.0	0.0	0.	0.	0.0	0.0
13	3.3	0.0	37.0	90.0	55.0	0.0	0.	0.	0.0	0.0
14	3.2	0.0	39.0	36.0	24.0	0.0	0.	0.	0.0	0.0
15	3.2	0.0	23.0	33.0	29.0	0.0	0.	0.	0.0	0.0
16	3.2	0.0	27.0	48.0	29.0	0.0	0.	0.	0.0	0.0
17	3.2	0.0	29.0	55.0	29.0	0.0	0.	0.	0.0	0.0
18	3.1	0.0	41.0	70.0	42.0	0.0	0.	0.	0.0	0.0
19	3.2	0.0	22.0	20.0	11.0	0.0	0.	0.	0.0	0.0
20	3.3	0.0	41.0	54.0	38.0	0.0	0.	0.	0.0	0.0
MEAN	3.2	0.0	29.8	45.0	27.6	0.0	0.	0.	0.0	0.0
STD DEV	.1	0.0	6.9	17.7	11.5	0.0	0.	0.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA STUDY AREA UPPER GOVT DATE 01 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	3.3	9.0	24.0	0.0	0.0	0.0	0.	0.	0.0	0.0
2	3.3	9.0	26.0	0.0	0.0	0.0	0.	0.	0.0	0.0
3	3.4	0.0	27.0	0.0	0.0	0.0	0.	0.	0.0	0.0
4	3.4	0.0	22.5	0.0	0.0	0.0	0.	0.	0.0	0.0
5	3.3	9.0	28.5	0.0	0.0	0.0	0.	0.	0.0	0.0
6	3.3	9.0	35.0	0.0	0.0	0.0	0.	0.	0.0	0.0
7	3.4	0.0	19.0	0.0	0.0	0.0	0.	0.	0.0	0.0
8	3.4	0.0	20.0	0.0	0.0	0.0	0.	0.	0.0	0.0
9	3.3	9.0	33.3	0.0	0.0	0.0	0.	0.	0.0	0.0
10	3.3	9.1	33.0	0.0	0.0	0.0	0.	0.	0.0	0.0
11	3.3	9.0	35.0	0.0	0.0	0.0	0.	0.	0.0	0.0
12	3.4	9.0	16.0	0.0	0.0	0.0	0.	0.	0.0	0.0
13	3.3	9.0	32.0	0.0	0.0	0.0	0.	0.	0.0	0.0
14	3.3	9.0	38.5	0.0	0.0	0.0	0.	0.	0.0	0.0
15	3.3	9.0	20.0	0.0	0.0	0.0	0.	0.	0.0	0.0
16	3.3	9.1	25.5	0.0	0.0	0.0	0.	0.	0.0	0.0
17	3.4	0.0	32.0	0.0	0.0	0.0	0.	0.	0.0	0.0
18	3.4	0.0	35.5	0.0	0.0	0.0	0.	0.	0.0	0.0
19	3.3	9.0	21.0	0.0	0.0	0.0	0.	0.	0.0	0.0
20	3.3	9.0	38.0	0.0	0.0	0.0	0.	0.	0.0	0.0
MEAN	3.3	9.0	28.1	0.0	0.0	0.0	0.	0.	0.0	0.0
STD DEV	.0	.0	6.9	0.0	0.0	0.0	0.	0.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA STUDY AREA UPPER GOVT DATE 13 JUNE 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE		PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
	VEG.	REPR.								
1	3.5	0.0	26.0	0.0	0.0	0.0	0.	0.	.3	0.0
2	3.5	0.0	28.0	0.0	0.0	0.0	0.	0.	.5	0.0
3	3.5	0.0	26.0	0.0	0.0	0.0	0.	0.	.3	0.0
4	3.5	0.0	27.0	0.0	0.0	0.0	0.	0.	.2	0.0
5	3.5	0.0	31.0	0.0	0.0	0.0	0.	0.	.3	0.0
6	3.5	0.0	35.5	0.0	0.0	0.0	0.	0.	.2	0.0
7	3.3	0.0	22.5	0.0	0.0	0.0	0.	0.	.3	0.0
8	3.3	0.0	20.0	0.0	0.0	0.0	0.	0.	.3	0.0
9	3.4	9.3	33.0	0.0	0.0	0.0	0.	0.	.5	.5
10	3.3	0.0	31.0	0.0	0.0	0.0	0.	0.	.3	0.0
11	3.3	0.0	33.0	0.0	0.0	0.0	0.	0.	.3	0.0
12	3.3	0.0	15.0	0.0	0.0	0.0	0.	0.	.3	0.0
13	3.3	0.0	36.0	0.0	0.0	0.0	0.	0.	.3	0.0
14	3.3	0.0	39.0	0.0	0.0	0.0	0.	0.	.3	0.0
15	3.3	9.3	35.0	0.0	0.0	0.0	0.	0.	.3	.5
16	3.5	0.0	28.0	0.0	0.0	0.0	0.	0.	.2	0.0
17	3.5	0.0	30.0	0.0	0.0	0.0	0.	0.	.3	0.0
18	3.5	0.0	36.0	0.0	0.0	0.0	0.	0.	.3	0.0
19	3.5	0.0	22.0	0.0	0.0	0.0	0.	0.	.2	0.0
20	3.5	0.0	39.0	0.0	0.0	0.0	0.	0.	.4	0.0
MEAN	3.4	9.3	29.7	0.0	0.0	0.0	0.	0.	.3	.5
STD DEV	.1	0.0	6.5	0.0	0.0	0.0	0.	0.	.1	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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  ARTEMISIA TRIDENTATA   STUDY AREA UPPER GOVT          DATE 28  JUNE      1982
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   PLANT PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT  PLANT   DEAD    NEW   NEW
   NO.   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM   AGE    BRANCH   VEG.  SEED
          VEG.  REPR.                              CLASS  PERCENT  TWIG  STALK
                                                                   LNGTH LNGTH
****************************************************************************
      1    3.9   0.0   23.0    0.0    0.0    0.0   0.         0.   0.0   0.0
      2    3.8   9.2   17.0    0.0    0.0    0.0   0.         0.   0.0   3.5
      3    3.8   9.2   27.0    0.0    0.0    0.0   0.         0.   0.0   2.0
      4    3.8   9.3   25.0    0.0    0.0    0.0   0.         0.   0.0   3.5
      5    3.8   9.3   29.0    0.0    0.0    0.0   0.         0.   0.0   5.0
      6    3.8   9.3   32.0    0.0    0.0    0.0   0.         0.   0.0   2.5
      7    3.8   0.0   19.0    0.0    0.0    0.0   0.         0.   0.0   0.0
      8    3.9   9.3   20.0    0.0    0.0    0.0   0.         0.   0.0   3.0
      9    3.9   9.2   32.5    0.0    0.0    0.0   0.         0.   0.0   2.5
     10    3.9   9.3   33.5    0.0    0.0    0.0   0.         0.   0.0   2.5
     11    3.8   0.0   34.5    0.0    0.0    0.0   0.         0.   0.0   0.0
     12    3.8   0.0   15.5    0.0    0.0    0.0   0.         0.   0.0   0.0
     13    3.9   9.3   36.0    0.0    0.0    0.0   0.         0.   0.0   2.0
     14    3.9   9.3   41.0    0.0    0.0    0.0   0.         0.   0.0   2.5
     15    3.8   0.0   21.0    0.0    0.0    0.0   0.         0.   0.0   0.0
     16    3.8   9.3   26.0    0.0    0.0    0.0   0.         0.   0.0   3.5
     17    3.9   9.3   31.0    0.0    0.0    0.0   0.         0.   0.0   5.0
     18    3.9   9.3   35.5    0.0    0.0    0.0   0.         0.   0.0   7.0
     19    3.7   0.0   20.0    0.0    0.0    0.0   0.         0.   0.0   0.0
     20    3.9   9.3   39.0    0.0    0.0    0.0   0.         0.   0.0   6.5


    MEAN   3.8   9.3   27.9    0.0    0.0    0.0   0.         0.   0.0   3.6

  STD DEV   .1    .0    7.6    0.0    0.0    0.0   0.         0.   0.0   1.6

   0.0 = NOT RECORDED

   MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA    STUDY AREA UPPER GOVT          DATE 11  JULY      1982
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 PLANT PHENOLOGICAL   PLANT   PLANT   PLANT   PLANT   PLANT    DEAD     NEW   NEW
 NO.   STAGE SCORE    HGHT    LNGTH   WIDTH   DIAM    AGE      BRANCH   VEG.  SEED
         VEG.  REPR.                                  CLASS    PERCENT  TWIG  STALK
                                                                        LNGTH LNGTH
********************************************************************************
     1      4.0   0.0     0.0     0.0     0.0     0.0    0.        0.       .7   0.0
     2      3.8   9.4     0.0     0.0     0.0     0.0    0.        0.       .4   3.0
     3      3.8   9.4     0.0     0.0     0.0     0.0    0.        0.       .5   2.0
     4      3.9   9.5     0.0     0.0     0.0     0.0    0.        0.       .7   4.0
     5      3.9   9.5     0.0     0.0     0.0     0.0    0.        0.       .5   4.0
     6      3.8   9.5     0.0     0.0     0.0     0.0    0.        0.       .5   3.5
     7      3.8   9.3     0.0     0.0     0.0     0.0    0.        0.       .4   1.0
     8      3.8   9.4     0.0     0.0     0.0     0.0    0.        0.       .4   3.0
     9      3.9   9.4     0.0     0.0     0.0     0.0    0.        0.       .5   3.5
    10      4.0   9.4     0.0     0.0     0.0     0.0    0.        0.       .8   3.0
    11      4.0   0.0     0.0     0.0     0.0     0.0    0.        0.       .9   0.0
    12      4.0   9.4     0.0     0.0     0.0     0.0    0.        0.       .8   2.5
    13      4.0   9.5     0.0     0.0     0.0     0.0    0.        0.       .8   4.0
    14      3.9   9.4     0.0     0.0     0.0     0.0    0.        0.       .6   3.0
    15      3.9   9.5     0.0     0.0     0.0     0.0    0.        0.       .5   3.0
    16      3.9   9.5     0.0     0.0     0.0     0.0    0.        0.       .7   4.5
    17      3.8   9.4     0.0     0.0     0.0     0.0    0.        0.       .5   4.0
    18      3.9   9.4     0.0     0.0     0.0     0.0    0.        0.       .5   4.0
    19      4.0   0.0     0.0     0.0     0.0     0.0    0.        0.       .8   0.0
    20      4.0   9.4     0.0     0.0     0.0     0.0    0.        0.       .8   3.5


    MEAN  3.9   9.4     0.0     0.0     0.0     0.0    0.        0.       .6   3.3

 STD DEV   .1    .1     0.0     0.0     0.0     0.0    0.        0.       .2    .9

 0.0 = NOT RECORDED

 MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA UPPER GOVT   DATE 25 JULY 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.0	0.0	22.0	0.0	0.0	0.0	0.	0.	0.0	0.0
2	4.0	9.5	21.0	0.0	0.0	0.0	0.	0.	0.0	4.0
3	4.0	9.5	24.0	0.0	0.0	0.0	0.	0.	0.0	4.0
4	4.0	9.5	25.0	0.0	0.0	0.0	0.	0.	0.0	5.0
5	4.0	9.5	33.5	0.0	0.0	0.0	0.	0.	0.0	5.0
6	4.0	9.5	33.0	0.0	0.0	0.0	0.	0.	0.0	3.0
7	3.9	0.0	28.5	0.0	0.0	0.0	0.	0.	0.0	0.0
8	4.1	9.5	19.0	0.0	0.0	0.0	0.	0.	0.0	7.0
9	4.1	9.5	41.0	0.0	0.0	0.0	0.	0.	0.0	5.5
10	4.1	9.5	34.0	0.0	0.0	0.0	0.	0.	0.0	4.0
11	4.1	0.0	34.0	0.0	0.0	0.0	0.	0.	0.0	3.5
12	4.0	9.5	16.5	0.0	0.0	0.0	0.	0.	0.0	4.0
13	3.9	9.5	36.0	0.0	0.0	0.0	0.	0.	0.0	3.0
14	4.0	9.4	38.0	0.0	0.0	0.0	0.	0.	0.0	3.5
15	4.0	9.5	25.0	0.0	0.0	0.0	0.	0.	0.0	2.5
16	4.1	9.5	26.5	0.0	0.0	0.0	0.	0.	0.0	6.0
17	4.0	9.5	30.5	0.0	0.0	0.0	0.	0.	0.0	4.0
18	4.1	9.5	35.0	0.0	0.0	0.0	0.	0.	0.0	7.5
19	4.0	0.0	20.0	0.0	0.0	0.0	0.	0.	0.0	0.0
20	4.1	9.5	40.0	0.0	0.0	0.0	0.	0.	0.0	6.5
MEAN	4.0	9.5	29.1	0.0	0.0	0.0	0.	0.	0.0	4.6
STD DEV	.1	.0	7.4	0.0	0.0	0.0	0.	0.	0.0	1.5

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA   STUDY AREA UPPER GOVT   DATE 10 AUGUST 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.1	0.0	0.0	0.0	0.0	0.0	0.	0.	.5	0.0
2	4.1	9.7	0.0	0.0	0.0	0.0	0.	0.	.5	3.0
3	4.1	9.6	0.0	0.0	0.0	0.0	0.	0.	.4	2.5
4	4.2	9.8	0.0	0.0	0.0	0.0	0.	0.	.6	4.0
5	4.2	9.8	0.0	0.0	0.0	0.0	0.	0.	.6	6.0
6	4.0	9.8	0.0	0.0	0.0	0.0	0.	0.	0.0	2.5
7	4.0	9.8	0.0	0.0	0.0	0.0	0.	0.	0.0	3.8
8	4.0	9.8	0.0	0.0	0.0	0.0	0.	0.	0.0	3.0
9	4.1	9.8	0.0	0.0	0.0	0.0	0.	0.	.3	3.0
10	4.1	9.8	0.0	0.0	0.0	0.0	0.	0.	.5	3.0
11	4.3	0.0	0.0	0.0	0.0	0.0	0.	0.	.8	0.0
12	4.2	9.5	0.0	0.0	0.0	0.0	0.	0.	.5	3.0
13	4.1	9.8	0.0	0.0	0.0	0.0	0.	0.	.4	3.5
14	4.2	9.8	0.0	0.0	0.0	0.0	0.	0.	.5	4.0
15	4.1	9.8	0.0	0.0	0.0	0.0	0.	0.	.4	3.0
16	4.1	9.8	0.0	0.0	0.0	0.0	0.	0.	.4	3.0
17	4.0	9.6	0.0	0.0	0.0	0.0	0.	0.	0.0	3.0
18	4.2	9.8	0.0	0.0	0.0	0.0	0.	0.	.5	2.5
19	4.0	9.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
20	4.2	9.8	0.0	0.0	0.0	0.0	0.	0.	.5	4.0
MEAN	4.1	9.7	0.0	0.0	0.0	0.0	0.	0.	.5	3.3
STD DEV	.1	.2	0.0	0.0	0.0	0.0	0.	0.	.1	.9

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA STUDY AREA UPPER GOVT DATE 27 AUGUST 1982

PLANT NO.	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
1	4.6	0.0	0.0	0.0	0.0	0.0	0.	0.	1.0	0.0
2	4.5	9.8	0.0	0.0	0.0	0.0	0.	0.	.8	4.0
3	4.4	9.8	0.0	0.0	0.0	0.0	0.	0.	.5	4.0
4	4.5	9.9	0.0	0.0	0.0	0.0	0.	0.	.8	5.0
5	4.4	9.9	0.0	0.0	0.0	0.0	0.	0.	.5	6.0
6	4.2	9.9	0.0	0.0	0.0	0.0	0.	0.	.4	3.5
7	4.3	0.0	0.0	0.0	0.0	0.0	0.	0.	.4	0.0
8	4.2	9.8	0.0	0.0	0.0	0.0	0.	0.	.4	4.0
9	4.4	9.6	0.0	0.0	0.0	0.0	0.	0.	.5	4.0
10	4.3	9.8	0.0	0.0	0.0	0.0	0.	0.	.5	3.5
11	4.6	0.0	0.0	0.0	0.0	0.0	0.	0.	1.0	0.0
12	4.4	9.8	0.0	0.0	0.0	0.0	0.	0.	.5	3.0
13	4.4	9.8	0.0	0.0	0.0	0.0	0.	0.	.5	3.0
14	4.4	9.8	0.0	0.0	0.0	0.0	0.	0.	.8	4.5
15	4.2	9.8	0.0	0.0	0.0	0.0	0.	0.	.3	3.5
16	4.4	9.8	0.0	0.0	0.0	0.0	0.	0.	.5	3.0
17	4.2	9.8	0.0	0.0	0.0	0.0	0.	0.	.3	3.5
18	4.4	9.9	0.0	0.0	0.0	0.0	0.	0.	.8	3.5
19	4.3	0.0	0.0	0.0	0.0	0.0	0.	0.	.3	0.0
20	4.3	9.8	0.0	0.0	0.0	0.0	0.	0.	.5	5.0
MEAN	4.4	9.8	0.0	0.0	0.0	0.0	0.	0.	.6	3.9
STD DEV	.1	.1	0.0	0.0	0.0	0.0	0.	0.	.2	.8

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

TABLE V. Average phenological development for 1982 for the prime species for the sampling dates.

Page

Agropyron smithii

Bud Kimball Exclosure 335
Cumberland # 3 Exclosure 336
Demer Exclosure 337
Farson Exclosure 338
Horse Creek Exclosure 339
Mesa Antelope Exclosure 340
Owl Draw Exclosure 341
Red Wash # 2 Exclosure 342
Shoshoni # 7 Exclosure 343
Sweetwater Exclosure 344
Upper Government Draw Exclosure 345

Agropyron spicatum

Bud Kimball Exclosure 346
Cedar Mountain Exclosure 347
Cumberland # 3 Exclosure 348
Demer Exclosure 349
Horse Creek Exclosure 350
Owl Draw Exclosure 351
Red Wash # 2 Exclosure 352

Artemisia nova

Horse Creek exclosure 353
Owl Draw Exclosure 354
Sweetwater Exclosure 355

Artemisia tridentata

Bud Kimball Exclosure 356
Cedar Mountain Exclosure 357
Cumberland # 3 Exclosure 358
Demer Exclosure 359
Farson Exclosure 360
Horse Creek Exclosure 361
Mesa Antelope Exclosure 362
Owl Draw Exclosure 363
Red Wash # 2 Exclosure 364
Shoshoni # 7 Exclosure 365
Sweetwater Exclosure 366
Upper Government Draw Exclosure 367

AGROPYRON SMITHII   STUDY AREA BUD KIMBAL

DATE		PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
30 APRIL	1982	4.4	0.0	0.0	10.8	0.0	0.0	0.0
18 MAY	1982	4.9	0.0	.3	15.6	0.0	0.0	1.5
02 JUNE	1982	5.0	0.0	.3	16.6	0.0	0.0	0.0
29 JUNE	1982	5.2	0.0	.3	16.6	0.0	0.0	0.0
10 JULY	1982	6.1	0.0	.2	17.0	0.0	0.0	0.0
26 JULY	1982	6.3	0.0	.2	17.9	0.0	0.0	0.0
9 AUGUST	1982	6.5	0.0	0.0	0.0	0.0	0.0	0.0
28 AUGUST	1982	7.1	0.0	0.0	0.0	0.0	0.0	0.0

0.0 = NOT MEASURED

MEASUREMENTS IN CENTIMETERS

ACROPYRON SMITHII STUDY AREA CUMBER. 3

DATE		PHENOLOGICAL STAGE SCORE		MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
		VEG.	REPR.					
30 APRIL	1982	2.8	0.0	.2	6.2	0.0	0.0	1.8
03 JUNE	1982	5.1	0.0	.3	18.1	0.0	0.0	0.0
15 JUNE	1982	5.2	0.0	.2	18.1	0.0	0.0	0.0
29 JUNE	1982	5.7	0.0	.2	20.5	0.0	0.0	0.0
11 JULY	1982	6.2	0.0	.2	21.3	0.0	0.0	0.0
27 JULY	1982	6.4	0.0	.3	21.8	0.0	0.0	0.0
9 AUGUST	1982	6.4	0.0	0.0	0.0	0.0	0.0	0.0

0.0 = NOT MEASURED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII STUDY AREA DEMER

DATE		PHENOLOGICAL STAGE SCORE		MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
		VEG.	REPR.					
30 APRIL	1982	4.3	0.0	0.0	13.1	0.0	0.0	0.0
18 MAY	1982	4.5	0.0	.1	13.3	0.0	0.0	1.2
02 JUNE	1982	4.5	0.0	.2	14.3	0.0	0.0	0.0
29 JUNE	1982	5.1	0.0	.2	14.2	0.0	0.0	0.0
10 JULY	1982	5.9	0.0	.1	14.2	0.0	0.0	0.0
25 JULY	1982	6.3	0.0	.1	13.8	0.0	0.0	0.0
9 AUGUST	1982	6.3	0.0	0.0	0.0	0.0	0.0	0.0

0.0 = NOT MEASURED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII   STUDY AREA FARSON

DATE		PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
30 APRIL	1982	3.1	0.0	.2	7.2	0.0	0.0	2.1
19 MAY	1982	4.5	0.0	.2	11.0	0.0	0.0	1.8
3 JUNE	1982	4.5	0.0	.2	13.8	0.0	0.0	0.0
15 JUNE	1982	4.5	0.0	.2	13.6	0.0	0.0	0.0
30 JUNE	1982	6.0	0.0	.2	15.2	0.0	0.0	0.0
10 JULY	1982	6.4	0.0	.2	13.3	0.0	0.0	0.0
28 JULY	1982	6.6	0.0	.2	16.1	0.0	0.0	0.0
9 AUGUST	1982	6.6	0.0	0.0	0.0	0.0	0.0	0.0

0.0 = NOT MEASURED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII STUDY AREA HORSE CK.

DATE		PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
30 APRIL	1982	4.6	0.0	0.0	11.6	0.0	0.0	0.0
18 MAY	1982	4.7	0.0	.3	13.3	0.0	0.0	1.5
02 JUNE	1982	4.8	0.0	.3	14.6	0.0	0.0	0.0
29 JUNE	1982	5.4	0.0	.4	19.0	0.0	0.0	0.0
9 JULY	1982	6.0	0.0	.2	15.8	0.0	0.0	0.0
26 JULY	1982	6.2	0.0	.2	17.1	0.0	0.0	0.0
9 AUGUST	1982	6.5	0.0	0.0	0.0	0.0	0.0	0.0
28 AUGUST	1982	6.9	0.0	0.0	0.0	0.0	0.0	0.0

0.0 = NOT MEASURED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII STUDY AREA MESA ANT.

DATE		PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
30 APRIL	1982	3.6	0.0	.1	6.6	0.0	0.0	1.3
19 MAY	1982	4.3	0.0	.1	10.6	0.0	0.0	1.1
3 JUNE	1982	4.6	0.0	.2	13.7	0.0	0.0	0.0
15 JUNE	1982	5.3	0.0	.2	14.0	0.0	0.0	0.0
30 JUNE	1982	5.5	0.0	.2	14.4	0.0	0.0	0.0
10 JULY	1982	6.3	0.0	.2	14.2	0.0	0.0	0.0
27 JULY	1982	6.3	0.0	.2	16.2	0.0	0.0	0.0
9 AUGUST	1982	6.4	0.0	0.0	0.0	0.0	0.0	0.0

0.0 = NOT MEASURED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII   STUDY AREA OWL DRAW

DATE		PHENOLOGICAL STAGE SCORE		MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
		VEG.	REPR.					
1 MAY	1982	4.0	0.0	0.0	7.0	0.0	0.0	0.0
17 MAY	1982	4.3	0.0	.3	10.9	0.0	0.0	1.0
1 JUNE	1982	5.1	0.0	.2	13.3	0.0	0.0	0.0
28 JUNE	1982	5.3	0.0	.2	14.3	0.0	0.0	0.0
11 JULY	1982	6.0	0.0	.2	13.7	0.0	0.0	0.0
10 AUGUST	1982	6.4	0.0	0.0	0.0	0.0	0.0	0.0
27 AUGUST	1982	6.4	0.0	0.0	0.0	0.0	0.0	0.0

0.0 = NOT MEASURED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII STUDY AREA RED WASH 2

DATE		PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
29 APRIL	1982	2.8	0.0	.1	6.0	0.0	0.0	1.2
20 MAY	1982	3.2	0.0	.1	10.9	0.0	0.0	2.0
02 JUNE	1982	4.6	0.0	.2	14.7	0.0	0.0	0.0
14 JUNE	1982	4.6	9.0	.2	12.9	0.0	0.0	0.0
28 JUNE	1982	5.4	0.0	.2	14.2	0.0	0.0	0.0
11 JULY	1982	6.3	0.0	.1	15.8	0.0	0.0	0.0
25 JULY	1982	6.3	0.0	.2	14.7	0.0	0.0	0.0
10 AUGUST	1982	6.5	0.0	0.0	0.0	0.0	0.0	0.0

0.0 = NOT MEASURED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII   STUDY AREA SHOSHONI 7

DATE		PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
29 APRIL	1982	2.6	0.0	0.0	4.0	0.0	0.0	0.0
17 MAY	1982	3.3	0.0	.2	5.5	0.0	0.0	1.0
01 JUNE	1982	3.9	0.0	.2	8.8	0.0	0.0	0.0
16 JUNE	1982	4.0	0.0	.2	9.3	0.0	0.0	0.0
28 JUNE	1982	4.9	0.0	.3	11.8	0.0	0.0	0.0
10 JULY	1982	5.7	0.0	.2	13.7	0.0	0.0	0.0
25 JULY	1982	6.1	0.0	.3	13.8	0.0	0.0	0.0
8 AUGUST	1982	6.3	0.0	0.0	0.0	0.0	0.0	0.0
28 AUGUST	1982	6.5	0.0	0.0	0.0	0.0	0.0	0.0

0.0 = NOT MEASURED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SMITHII   STUDY AREA SWEETWATER

DATE		PHENOLOGICAL STAGE VEG.	SCORE REPR.	MAX. LEAF WIDTH	MAX. LEAF HGHT.	MAX. SPIKE HGHT.	NOS. SPK/ CULM	NOS. VEG. PLANT
1 MAY	1982	3.6	0.0	.2	7.2	0.0	0.0	2.0
19 MAY	1982	4.2	0.0	.2	10.6	0.0	0.0	1.8
4 JUNE	1982	4.6	0.0	.2	14.2	0.0	0.0	0.0
17 JUNE	1982	5.2	0.0	.2	13.5	0.0	0.0	0.0
28 JUNE	1982	5.6	0.0	.2	16.0	0.0	0.0	0.0
10 JULY	1982	6.2	0.0	.2	15.0	0.0	0.0	0.0
25 JULY	1982	6.4	0.0	.2	16.6	0.0	0.0	0.0
8 AUGUST	1982	6.5	0.0	0.0	0.0	0.0	0.0	0.0
27 AUGUST	1982	7.1	0.0	0.0	0.0	0.0	0.0	0.0

0.0 = NOT MEASURED

MEASUREMENTS IN CENTIMETERS

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AGROPYRON SMITHII       STUDY AREA UPPER GOVT
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     DATE                PHENOLOGICAL   MAX.   MAX.   MAX.    NOS.  NOS.
                         STAGE  SCORE   LEAF   LEAF   SPIKE   SPK/  VEG.
                          VEG.  REPR.   WIDTH  HGHT.  HGHT.   CULM  PLANT
*******************************************************************************

29 APRIL     1982         2.7    0.0    0.0     4.0   0.0     0.0   0.0

19 MAY       1982         3.0    0.0     .1     6.2   0.0     0.0   1.2

 1 JUNE      1982         4.0    0.0     .2    10.7   0.0     0.0   0.0

13 JUNE      1982         4.1    0.0     .2    12.1   0.0     0.0   0.0

28 JUNE      1982         4.7    0.0     .1    12.0   0.0     0.0   0.0

11 JULY      1982         6.0    0.0     .1    13.5   0.0     0.0   0.0

25 JULY      1982         6.2    0.0     .1    12.1   0.0     0.0   0.0

10 AUGUST    1982         6.6    0.0    0.0     0.0   0.0     0.0   0.0

27 AUGUST    1982         7.9    0.0    0.0     0.0   0.0     0.0   0.0


 0.0 = NOT MEASURED


 MEASUREMENTS IN CENTIMETERS
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AGROPYRON SPICATUM   STUDY AREA BUD KIMBAL

DATE	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
30 APRIL 1982	3.5	0.0	0.0	0.0	0.0	0.0	14.3	0.0	0.	0.	0.
18 MAY 1982	3.6	0.0	28.9	21.5	0.0	.2	23.6	0.0	0.	0.	0.
02 JUNE 1982	5.2	0.0	0.0	0.0	0.0	.3	22.2	0.0	0.	0.	0.
29 JUNE 1982	5.7	11.9	0.0	0.0	0.0	.3	23.5	49.3	6.	17.	0.
10 JULY 1982	6.1	14.7	0.0	0.0	0.0	0.0	26.4	50.2	0.	0.	0.
26 JULY 1982	6.3	16.1	0.0	0.0	0.0	.2	22.3	47.0	0.	0.	0.
09 AUGUST 1982	6.5	16.4	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
28 AUGUST 1982	6.7	16.8	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SPICATUM   STUDY AREA CEDAR MTN.

DATE			PHENOLOGICAL STAGE SCORE		CLUMP			MAX.	MAX.	MAX.	NO.	NO.	NO.
			VEG.	REPR.	LGTH.	WIDTH	DIAM.	LEAF WIDTH	LEAF HGHT	SPK HGHT	SPL/ CULM	REPR CULM	VEG CULM
29	APRIL	1982	3.3	0.0	0.0	0.0	0.0	.2	7.5	0.0	0.	0.	0.
20	MAY	1982	4.4	0.0	13.3	15.4	7.2	.2	0.0	0.0	0.	0.	9.
02	JUNE	1982	5.3	0.0	0.0	0.0	0.0	.3	20.6	0.0	0.	0.	0.
14	JUNE	1982	5.4	10.4	0.0	0.0	0.0	.3	16.7	21.2	0.	0.	0.
29	JUNE	1982	5.8	10.8	0.0	0.0	0.0	.2	17.8	30.9	0.	0.	0.
11	JULY	1982	6.2	11.1	0.0	0.0	0.0	.2	20.2	31.9	0.	0.	0.
26	JULY	1982	6.3	16.5	0.0	0.0	0.0	.3	20.6	25.8	0.	0.	0.
10	AUGUST	1982	6.3	16.9	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SPICATUM   STUDY AREA CUMBER 3

DATE	PHENOLOGICAL STAGE SCORE		CLUMP			MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
	VEG.	REPR.	LGTH.	WIDTH	DIAM.						
30 APRIL 1982	3.0	0.0	0.0	0.0	0.0	.2	3.6	0.0	0.	0.	0.
03 JUNE 1982	4.9	0.0	0.0	0.0	0.0	.3	27.4	0.0	0.	0.	0.
15 JUNE 1982	5.3	9.0	0.0	0.0	0.0	.3	24.7	0.0	0.	0.	0.
29 JUNE 1982	5.4	10.5	0.0	0.0	0.0	.2	26.6	37.3	0.	0.	0.
11 JULY 1982	6.3	11.4	0.0	0.0	0.0	.2	27.3	43.0	0.	0.	0.
27 JULY 1982	6.4	16.6	0.0	0.0	0.0	.3	30.2	44.2	0.	0.	0.
09 AUGUST 1982	6.4	16.9	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SPICATUM STUDY AREA DEMER

DATE	PHENOLOGICAL STAGE SCORE		CLUMP			MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
	VEG.	REPR.	LGTH.	WIDTH	DIAM.						
30 APRIL 1982	3.5	0.0	0.0	0.0	0.0	0.0	21.1	0.0	0.	0.	0.
18 MAY 1982	3.4	0.0	19.1	17.3	17.1	.2	0.0	0.0	0.	0.	0.
02 JUNE 1982	5.2	9.3	0.0	0.0	0.0	.3	23.0	29.8	5.	12.	0.
29 JUNE 1982	5.8	13.4	0.0	0.0	0.0	.3	23.6	49.0	6.	17.	0.
10 JULY 1982	6.1	15.9	0.0	0.0	0.0	0.0	24.3	48.8	0.	0.	0.
25 JULY 1982	6.2	16.0	0.0	0.0	0.0	.3	22.1	37.0	0.	0.	0.
09 AUGUST 1982	6.4	16.5	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SPICATUM   STUDY AREA HORSE CRK

DATE	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	CLUMP LGTH.	CLUMP WIDTH	CLUMP DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
30 APRIL 1982	4.8	0.0	0.0	0.0	0.0	0.0	13.9	0.0	0.	0.	0.
18 MAY 1982	4.9	0.0	18.4	11.6	0.0	.4	15.9	0.0	0.	0.	0.
02 JUNE 1982	5.3	9.5	0.0	0.0	0.0	.3	13.8	24.2	5.	8.	0.
29 JUNE 1982	5.7	10.6	0.0	0.0	0.0	.4	16.2	50.6	6.	10.	0.
09 JULY 1982	6.2	13.8	0.0	0.0	0.0	0.0	23.8	51.5	0.	0.	0.
26 JULY 1982	6.3	16.7	0.0	0.0	0.0	.3	16.5	49.7	0.	0.	0.
09 AUGUST 1982	6.5	16.9	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
28 AUGUST 1982	6.6	16.9	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SPICATUM   STUDY AREA OWL DRAW

DATE			PHENOLOGICAL STAGE VEG.	SCORE REPR.	LGTH.	CLUMP WIDTH	DIAM.	MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
01	MAY	1982	4.1	0.0	0.0	0.0	0.0	0.0	6.9	0.0	0.	0.	0.
17	MAY	1982	4.6	0.0	5.0	3.0	8.5	.3	9.7	0.0	0.	0.	7.
01	JUNE	1982	5.2	0.0	9.1	0.0	0.0	.3	12.8	0.0	0.	0.	0.
28	JUNE	1982	5.3	10.4	0.0	0.0	0.0	.3	12.5	29.1	7.	4.	0.
11	JULY	1982	6.1	14.5	0.0	0.0	0.0	0.0	12.7	31.8	0.	0.	0.
10	AUGUST	1982	6.3	16.6	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.
27	AUGUST	1982	6.4	16.9	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

AGROPYRON SPICATUM   STUDY AREA RED WASH 2

DATE	PHENOLOGICAL STAGE SCORE		CLUMP			MAX. LEAF WIDTH	MAX. LEAF HGHT	MAX. SPK HGHT	NO. SPL/ CULM	NO. REPR CULM	NO. VEG CULM
	VEG.	REPR.	LGTH.	WIDTH	DIAM.						
29 APRIL 1982	3.8	0.0	0.0	0.0	0.0	.2	7.8	0.0	0.	0.	30.
20 MAY 1982	4.8	0.0	32.1	24.7	0.0	.3	17.6	0.0	0.	0.	0.
02 JUNE 1982	4.9	0.0	0.0	0.0	0.0	.4	26.3	0.0	0.	0.	0.
14 JUNE 1982	5.1	9.6	0.0	0.0	0.0	.3	23.9	22.3	0.	0.	0.
28 JUNE 1952	5.6	10.5	0.0	0.0	0.0	.3	27.1	30.4	0.	0.	0.
11 JULY 1982	6.3	11.6	0.0	0.0	0.0	.2	28.9	37.2	0.	0.	0.
25 JULY 1982	6.4	16.3	0.0	0.0	0.0	0.0	25.1	37.9	0.	0.	0.
10 AUGUST 1982	6.5	17.2	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA NOVA   STUDY AREA HORSE CRK

DATE			PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
30	APRIL	1982	3.2	0.0	24.3	0.0	0.0	0.0	0.	0.	0.0	0.0
18	MAY	1982	3.3	0.0	25.1	43.7	28.5	0.0	0.	0.	0.0	0.0
02	JUNE	1982	3.6	9.1	23.0	0.0	0.0	0.0	0.	0.	0.0	4.5
29	JUNE	1982	4.2	9.5	29.1	0.0	0.0	0.0	0.	0.	1.3	12.4
09	JULY	1982	4.3	9.5	0.0	0.0	0.0	0.0	0.	0.	1.3	10.5
26	JULY	1982	4.5	9.7	31.5	0.0	0.0	0.0	0.	0.	1.9	14.7
09	AUGUST	1982	4.6	9.8	0.0	0.0	0.0	0.0	0.	0.	1.5	9.7
28	AUGUST	1982	4.6	9.8	0.0	0.0	0.0	0.0	0.	0.	1.0	12.3
17	SEPT	1982	5.1	10.3	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA NOVA STUDY AREA OWL DRAW

DATE	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
01 MAY 1982	2.9	0.0	11.9	0.0	0.0	0.0	0.	0.	0.0	0.0
17 MAY 1982	3.3	0.0	11.7	29.8	18.8	0.0	0.	0.	0.0	0.0
01 JUNE 1982	3.3	9.1	10.4	0.0	0.0	0.0	0.	0.	0.0	0.0
28 JUNE 1982	4.0	9.3	10.4	0.0	0.0	0.0	0.	0.	0.0	4.1
11 JULY 1982	4.2	9.5	0.0	0.0	0.0	0.0	0.	0.	.9	6.6
10 AUGUST 1982	4.4	9.8	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
27 AUGUST 1982	4.5	9.8	0.0	0.0	0.0	0.0	0.	0.	1.3	9.1
16 SEPT 1982	5.1	13.4	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA NOVA   STUDY AREA SWEETWATER

DATE	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
01 MAY 1982	2.0	0.0	10.9	0.0	0.0	0.0	0.	0.	0.0	0.0
19 MAY 1982	3.2	0.0	13.0	39.2	24.8	0.0	0.	0.	0.0	0.0
04 JUNE 1982	3.3	9.2	12.1	0.0	0.0	0.0	0.	0.	.3	.6
16 JUNE 1982	3.5	9.3	11.0	0.0	0.0	0.0	0.	0.	0.0	2.8
28 JUNE 1982	3.5	9.4	0.0	0.0	0.0	0.0	0.	0.	.7	3.2
10 JULY 1982	3.6	9.5	0.0	0.0	0.0	0.0	0.	0.	.7	6.6
25 JULY 1982	4.1	9.5	15.9	0.0	0.0	0.0	0.	0.	.3	6.3
08 AUGUST 1982	4.6	9.7	0.0	0.0	0.0	0.0	0.	0.	.2	5.4
27 AUGUST 1982	4.6	9.8	0.0	0.0	0.0	0.0	0.	0.	.7	6.8
10 SEPT 1982	4.7	9.9	0.0	0.0	0.0	0.0	0.	0.	.4	5.8

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA STUDY AREA BUD KIMBAL

DATE			PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
30	APRIL	1982	3.2	0.0	22.9	0.0	0.0	0.0	0.	0.	0.0	0.0
18	MAY	1982	3.3	0.0	21.2	36.8	20.6	0.0	0.	0.	0.0	0.0
02	JUNE	1982	3.5	9.1	21.6	0.0	0.0	0.0	0.	0.	0.0	3.2
29	JUNE	1982	4.1	9.4	22.7	0.0	0.0	0.0	0.	0.	0.0	6.8
10	JULY	1982	4.2	9.5	0.0	0.0	0.0	0.0	0.	0.	.9	6.9
26	JULY	1982	4.6	9.5	22.5	0.0	0.0	0.0	0.	0.	2.3	9.4
09	AUGUST	1982	4.6	9.7	0.0	0.0	0.0	0.0	0.	0.	.9	6.8
28	AUGUST	1982	4.6	9.8	0.0	0.0	0.0	0.0	0.	0.	1.1	7.0
17	SEPT	1982	5.2	10.4	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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    ARTEMISIA TRIDENTATA   STUDY AREA  CEDAR MTN
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         DATE      PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT   PLANT  DEAD    NEW   NEW
                   STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM    AGE    BRANCH  VEG.  SEED
                    VEG.  REPR.                               CLASS  PERCENT TWIG  STALK
                                                                             LNGTH LNGTH
  **************************************************************************************

29  APRIL    1982  2.5   0.0    33.6    0.0    0.0    0.0   0.      0.       .1   0.0

20  MAY      1982  3.2   0.0    35.4   64.8   38.5   58.0   0.     95.      0.0   0.0

02  JUNE     1982  3.3   9.2    35.2    0.0    0.0    0.0   0.      0.       .4    .8

14  JUNE     1982  3.8   9.3    34.4    0.0    0.0    0.0   0.      0.      0.0   3.7

29  JUNE     1982  3.9   9.5     0.0    0.0    0.0    0.0   0.      0.      1.0   4.8

11  JULY     1982  4.0   9.6     0.0    0.0    0.0    0.0   0.      0.       .7   7.5

26  JULY     1982  4.3   9.6    41.1    0.0    0.0    0.0   0.      0.       .8   7.9

10  AUGUST   1982  4.9   9.7     0.0    0.0    0.0    0.0   0.      0.       .7   7.6


     0.0 = NOT RECORDED

     MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA CUMBER 3

DATE	PHENOLOGICAL STAGE SCORE		PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
	VEG.	REPR.								
30 APRIL 1982	2.5	0.0	54.0	0.0	0.0	0.0	0.	0.	0.0	0.0
03 JUNE 1982	3.4	9.2	56.4	0.0	0.0	0.0	0.	0.	.4	.5
15 JUNE 1982	3.6	9.2	52.3	0.0	0.0	0.0	0.	0.	0.0	2.5
29 JUNE 1982	3.9	9.4	0.0	0.0	0.0	0.0	0.	0.	1.2	4.9
11 JULY 1982	4.1	9.6	0.0	0.0	0.0	0.0	0.	0.	1.0	8.0
27 JULY 1982	4.5	9.6	60.9	0.0	0.0	0.0	0.	0.	1.7	9.3
09 AUGUST 1982	4.9	9.7	0.0	0.0	0.0	0.0	0.	0.	1.0	8.7
11 SEPT 1982	4.9	10.1	0.0	0.0	0.0	0.0	0.	0.	2.5	8.6

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA STUDY AREA DEMER

DATE			PHENOLOGICAL STAGE SCORE		PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
			VEG.	REPR.								
30	APRIL	1982	3.2	0.0	0.0	31.0	0.0	0.0	0.	0.	0.0	0.0
18	MAY	1982	3.3	0.0	28.3	48.8	31.2	0.0	0.	0.	0.0	0.0
02	JUNE	1982	3.5	9.0	27.2	0.0	0.0	0.0	0.	0.	0.0	1.6
29	JUNE	1982	4.0	9.3	29.9	0.0	0.0	0.0	0.	0.	0.0	4.2
10	JULY	1982	4.0	9.4	0.0	0.0	0.0	0.0	0.	0.	.6	3.5
25	JULY	1982	4.1	9.5	28.3	0.0	0.0	0.0	0.	0.	1.2	5.0
09	AUGUST	1982	4.4	9.7	0.0	0.0	0.0	0.0	0.	0.	.7	4.0
18	SEPT	1982	5.1	10.0	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA STUDY AREA FARSON

DATE			PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
30	APRIL	1982	2.3	0.0	23.6	0.0	0.0	0.0	0.	0.	0.0	0.0
19	MAY	1982	3.2	0.0	21.4	39.0	25.6	0.0	0.	0.	0.0	0.0
03	JUNE	1982	3.3	0.0	25.0	0.0	0.0	0.0	0.	0.	.3	0.0
15	JUNE	1982	3.4	9.0	0.0	0.0	0.0	0.0	0.	0.	0.0	1.0
30	JUNE	1982	3.5	9.2	0.0	0.0	0.0	0.0	0.	0.	.4	1.2
10	JULY	1982	3.6	9.5	0.0	0.0	0.0	0.0	0.	0.	.3	2.5
28	JULY	1982	4.1	9.6	23.4	0.0	0.0	0.0	0.	0.	.3	2.0
09	AUGUST	1982	4.7	9.7	0.0	0.0	0.0	0.0	0.	0.	.3	1.8
11	SEPT	1982	4.8	10.0	0.0	0.0	0.0	0.0	0.	0.	.3	2.2

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA   STUDY AREA HORSE CRK

DATE	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
30 APRIL 1982	3.3	0.0	31.3	0.0	0.0	0.0	0.	0.	0.0	0.0
18 MAY 1982	3.3	0.0	30.7	46.3	22.3	0.0	0.	0.	0.0	0.0
02 JUNE 1982	3.6	9.1	30.4	0.0	0.0	0.0	0.	0.	0.0	4.4
29 JUNE 1982	4.1	9.4	32.5	0.0	0.0	0.0	0.	0.	0.0	10.7
9 JULY 1982	4.5	9.5	0.0	0.0	0.0	0.0	0.	0.	2.8	11.2
26 JULY 1982	4.7	9.6	31.6	0.0	0.0	0.0	0.	0.	3.4	11.5
9 AUGUST 1982	4.7	9.7	0.0	0.0	0.0	0.0	0.	0.	2.8	7.6
28 AUGUST 1982	4.9	9.7	0.0	0.0	0.0	0.0	0.	0.	.9	9.7
17 SEPT 1982	5.2	10.2	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA STUDY AREA MESA ANTEL

DATE			PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
19	MAY	1982	3.3	0.0	21.7	45.6	25.0	0.0	0.	0.	0.0	0.0
03	JUNE	1982	3.4	9.0	22.2	0.0	0.0	0.0	0.	0.	.5	.8
15	JUNE	1982	3.7	9.2	22.7	0.0	0.0	0.0	0.	0.	0.0	3.1
30	JUNE	1982	3.9	9.4	0.0	0.0	0.0	0.0	0.	0.	1.2	4.4
10	JULY	1982	4.1	9.6	0.0	0.0	0.0	0.0	0.	0.	.8	9.1
27	JULY	1982	4.6	9.6	26.9	0.0	0.0	0.0	0.	0.	1.8	8.1
09	AUGUST	1982	4.9	9.8	0.0	0.0	0.0	0.0	0.	0.	.9	9.0
11	SEPT	1982	4.9	10.0	0.0	0.0	0.0	0.0	0.	0.	2.3	6.9

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA STUDY AREA OWL DRAW

DATE	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
01 MAY 1982	3.2	0.0	27.4	0.0	0.0	0.0	0.	0.	0.0	0.0
17 MAY 1982	3.3	0.0	27.4	42.5	32.2	0.0	0.	0.	0.0	0.0
01 JUNE 1982	3.5	9.1	27.5	0.0	0.0	0.0	0.	0.	0.0	2.3
28 JUNE 1982	4.0	9.3	28.8	0.0	0.0	0.0	0.	0.	0.0	4.7
11 JULY 1982	4.2	9.5	0.0	0.0	0.0	0.0	0.	0.	1.6	6.1
10 AUGUST 1982	4.5	9.7	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0
27 AUGUST 1982	4.6	9.8	0.0	0.0	0.0	0.0	0.	0.	.8	5.8
16 SEPT 1982	5.1	11.2	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA   STUDY AREA RED WASH 2

DATE	PHENOLOGICAL STAGE SCORE VEG.	REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
29 APRIL 1982	2.2	0.0	30.1	0.0	0.0	0.0	0.	0.	.1	0.0
20 MAY 1982	3.1	0.0	30.5	72.6	50.1	0.0	0.	49.	0.0	0.0
2 JUNE 1982	3.3	9.1	31.7	0.0	0.0	0.0	0.	0.	.1	.5
14 JUNE 1982	3.6	9.1	32.1	0.0	0.0	0.0	0.	0.	0.0	2.8
28 JUNE 1982	3.6	9.3	0.0	0.0	0.0	0.0	0.	0.	.7	4.3
11 JULY 1982	4.0	9.5	0.0	0.0	0.0	0.0	0.	0.	.6	7.5
25 JULY 1982	4.4	9.6	35.2	0.0	0.0	0.0	0.	0.	1.2	8.8
10 AUGUST 1982	4.8	9.7	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

ARTEMISIA TRIDENTATA   STUDY AREA   SHOSHONI 7

DATE	PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
29 APRIL 1982	2.8	0.0	19.2	0.0	0.0	0.0	0.	0.	0.0	0.0
17 MAY 1982	3.2	0.0	19.5	42.5	26.0	0.0	0.	0.	0.0	0.0
01 JUNE 1982	3.4	9.1	0.0	0.0	0.0	0.0	0.	0.	0.0	1.3
16 JUNE 1982	3.4	9.4	17.4	0.0	0.0	0.0	0.	0.	.4	1.5
28 JUNE 1982	3.7	9.4	18.3	0.0	0.0	0.0	0.	0.	0.0	4.1
10 JULY 1982	3.9	9.4	0.0	0.0	0.0	0.0	0.	0.	.5	3.9
25 JULY 1982	4.0	9.5	18.7	0.0	0.0	0.0	0.	0.	0.0	5.0
8 AUGUST 1982	4.1	9.7	0.0	0.0	0.0	0.0	0.	0.	.4	4.5
28 AUGUST 1982	4.3	9.8	0.0	0.0	0.0	0.0	0.	0.	.5	4.6
19 SEPT 1982	5.1	10.7	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

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ARTEMISIA TRIDENTATA   STUDY AREA  SWEETWATER
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        DATE      PHENOLOGICAL  PLANT  PLANT  PLANT  PLANT   PLANT  DEAD    NEW   NEW
                  STAGE SCORE   HGHT   LNGTH  WIDTH  DIAM     AGE   BRANCH  VEG.  SEED
                   VEG.  REPR.                               CLASS  PERCENT TWIG  STALK
                                                                            LNGTH LNGTH
  *********************************************************************************

01  MAY       1982  2.4   0.0    24.3    0.0    0.0    0.0   0.       0.     0.0   0.0

19  MAY       1982  3.2   0.0    23.6   53.6   40.1    0.0   0.       0.     0.0   0.0

03  JUNE      1982  3.3   9.0    24.8    0.0    0.0    0.0   0.       0.      .5    .7

16  JUNE      1982  3.6   9.2    24.2    0.0    0.0    0.0   0.       0.     0.0   2.6

28  JUNE      1982  3.6   9.4     0.0    0.0    0.0    0.0   0.       0.      .6   3.9

10  JULY      1982  3.7   9.6     0.0    0.0    0.0    0.0   0.       0.      .5   6.9

25  JULY      1982  4.2   9.6    27.4    0.0    0.0    0.0   0.       0.      .8   6.0

08  AUGUST    1982  4.5   9.6     0.0    0.0    0.0    0.0   0.       0.      .6   6.5

27  AUGUST    1982  4.6   9.7     0.0    0.0    0.0    0.0   0.       0.     1.2   5.8

10  SEPT      1982  4.7  10.0     0.0    0.0    0.0    0.0   0.       0.      .7   5.1


    0.0 = NOT RECORDED

    MEASUREMENTS IN CENTIMETERS
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ARTEMISIA TRIDENTATA   STUDY AREA UPPER GOVT

DATE			PHENOLOGICAL STAGE SCORE VEG.	PHENOLOGICAL STAGE SCORE REPR.	PLANT HGHT	PLANT LNGTH	PLANT WIDTH	PLANT DIAM	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH	NEW SEED STALK LNGTH
29	APRIL	1982	2.9	0.0	29.5	0.0	0.0	0.0	0.	0.	0.0	0.0
19	MAY	1982	3.2	0.0	29.8	45.0	27.6	0.0	0.	0.	0.0	0.0
01	JUNE	1982	3.3	9.0	28.1	0.0	0.0	0.0	0.	0.	0.0	0.0
13	JUNE	1982	3.4	9.3	29.7	0.0	0.0	0.0	0.	0.	.3	.5
28	JUNE	1982	3.8	9.3	27.9	0.0	0.0	0.0	0.	0.	0.0	3.6
11	JULY	1982	3.9	9.4	0.0	0.0	0.0	0.0	0.	0.	.6	3.3
25	JULY	1982	4.0	9.5	29.1	0.0	0.0	0.0	0.	0.	0.0	4.6
10	AUGUST	1982	4.1	9.7	0.0	0.0	0.0	0.0	0.	0.	.5	3.3
27	AUGUST	1982	4.4	9.8	0.0	0.0	0.0	0.0	0.	0.	.6	3.9

0.0 = NOT RECORDED

MEASUREMENTS IN CENTIMETERS

TABLE VI. Phenological development dates for all species for three major growth stages - growth initiation, full bloom, seed dissemination - by exclosure for the years 1973 through 1982.

	Page
Bud Kimball Exclosure	369
Cedar Mountain Exclosure	372
Cumberland # 3 Exclosure	375
Demer Exclosure	381
Farson Exclosure	384
Horse Creek Exclosure	387
Mesa Antelope Exclosure	392
Owl Draw Exclosure	395
Red Wash # 2 Exclosure	401
Shoshoni # 7 Exclosure	404
Sweetwater Exclosure	407
Upper Government Draw Exclosure	413

TABLE VI. (Continued):

STUDY AREA BUD KIMBALL

Growth Initiation

Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
AGCR	----	----	----	----	----	----	----	----	Apr	Apr
AGGL	----	----	----	----	----	----	----	----	Apr	Apr
AGSM	----	Mar	Mar	Mar	23 Apr	Apr	Apr	10 Apr	Apr	Apr
AGSP	----	----	----	----	----	Apr	Apr	Apr	10 Apr	Apr
ALTE	----	----	----	----	----	May	Apr	Apr	Apr	Apr
ANDI	----	----	----	----	----	----	----	----	Apr	Apr
ANOC	----	----	----	----	----	----	----	May	----	----
ARHO[2]	----	----	----	----	----	Apr	Apr	----	Apr	Apr
ARTR	----	20 May	May	May	23 Apr	Apr	Apr	8 Apr	12 Apr	Apr
ASPU	----	----	----	----	----	----	Apr	----	Apr	Apr
BOGR	----	----	----	----	----	Jun	Apr	1 Apr	15 Apr	Apr
BRJA	----	----	----	----	----	----	Apr	----	----	Apr
BRTE	----	----	----	Mar	23 Apr	----	Apr	Mar	Apr	Apr
CACH	----	----	----	----	23 Apr	----	----	Apr	Apr	Apr
CANU	----	----	----	----	----	----	Apr	Apr	Apr	Apr
CAAN	----	25 Apr	----	Apr	----	----	Apr	----	----	----
CHDE	----	----	----	----	----	----	Apr	----	----	----
CRMO	----	----	----	----	23 Apr	Apr	Apr	Apr	Apr	Apr
DEPI	----	----	----	----	----	May	Apr	Apr	Apr	Apr
ERPU	----	----	----	Apr	Apr	25 May	Apr	Apr	Apr	Apr
GIPU	----	----	----	----	----	----	----	May	----	----
HAGL	----	----	----	----	----	----	----	May	----	30 Apr
KOCR	----	Mar	Mar	Mar	Apr	----	Apr	Mar	----	Apr
LARE	----	----	----	Mar	Apr	25 May	Apr	Apr	2 May	Apr
LEDE	----	----	----	----	----	25 May	May	Apr	----	May
LERE	----	25 Apr	----	Apr	17 May	25 May	Apr	Apr	Apr	Apr
LEAL	----	----	----	----	----	----	----	----	----	----
LOOR	----	----	----	----	23 Apr	Apr	----	Apr	Mar	Apr
MACA	----	----	----	----	----	----	----	----	Apr	Apr
MAGL	----	----	----	----	----	----	----	10 Apr	----	Apr
MAGR	----	5 May	----	May	----	----	----	----	----	May
MATA	----	----	----	----	May	23 Apr	----	Apr	----	----
OPPO	----	----	----	Apr	23 Apr	25 May	Apr	30 Apr	25 Apr	Apr
ORHY	----	----	----	----	----	----	----	----	----	----
PHHO	----	----	----	Mar	23 Apr	25 May	Apr	Apr	Mar	Apr
PLPA	----	----	----	----	May	Jun	----	Apr	Apr	Apr
POSE	----	Mar	Mar	Mar	Mar	Apr	Apr	Mar	Mar	Apr
SIHY	----	Mar	Mar	Apr	----	----	Apr	----	Apr	Apr
SILI	----	----	----	----	----	----	----	----	----	----
SPCO	----	Mar	----	Apr	23 Apr	25 May	Apr	Apr	----	Apr
SPCR	----	----	----	----	----	----	----	----	----	----
STCO	----	Mar	Mar	Mar	Mar	----	Apr	Apr	Apr	Apr
STVI	----	----	----	Mar	----	----	----	Apr	Apr	----
TAOF	----	----	----	----	----	----	----	Apr	Apr	Apr
TRDU	----	----	----	----	----	Apr	Apr	Apr	Apr	Apr
VIAM	----	----	----	----	----	Apr	Apr	----	Apr	Apr
VINU	----	----	----	----	23 Apr	Apr	Apr	Apr	Apr	Apr
VUOC	----	----	----	----	May	----	----	----	----	----

TABLE VI. (Continued):

STUDY AREA BUD KIMBALL

Full Bloom

Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
AGCR	----	----	----	----	----	----	17 Jul	13 Jun	----	5 Jul
AGCL	----	----	----	----	----	----	----	11 Jun	18 May	10 Jul
AGSM	----	25 Jun	30 Jun	20 Jul	1 Jul	19 Jul	17 Jul	----	23 Jun	29 Jun
AGSP	----	----	----	----	Jun	----	11 Jun	----	20 Jun	30 Jun
ALTE	----	----	20 Jun	----	----	----	24 May	19 May	25 May	14 Jun
ANDI	----	----	----	----	----	----	----	----	----	25 Jun
ANOC	----	----	----	----	----	----	----	20 Jun	----	----
ARHO[2]	----	----	----	----	----	----	24 May	11 May	----	18 May
ARTR	25 Sep	20 Sep	Sep	25 Sep	17 Sep	----	22 Sep	29 Jul	15 Sep	16 Oct
ASPU	----	----	----	----	----	----	11 Jun	11 May	----	14 Jun
BOGR	----	----	----	----	----	19 Jul	----	----	----	----
BRJA	----	----	----	----	----	Jun	27 Jun	19 Jun	29 Jun	30 Jun
BRTE	----	15 Jun	25 Jun	23 Jun	8 Jun	----	11 Jun	----	2 Jun	15 Jun
CACH	----	----	----	----	8 Jun	----	----	26 May	5 Jun	14 Jun
CANU	----	----	----	----	----	----	11 Jun	15 Jun	17 Jun	14 Jun
CAAN	----	5 Jul	20 Jun	15 Jun	----	Jun	24 May	----	----	----
CHDE	----	----	----	----	----	----	----	6 Jul	----	----
CRMO	----	20 Jun	15 Jun	5 Jul	May	Jun	24 May	7 Jun	4 Jun	----
DEPI	----	----	20 Jun	15 Jun	----	----	24 May	May	2 Jun	14 Jun
ERPU	----	----	25 Jun	15 Jun	Jun	26 Jun	11 Jun	2 Jun	17 Jun	20 Jun
GIPU	----	----	----	----	----	----	----	10 Jun	----	----
HAGL	----	----	----	----	----	----	22 Sep	----	----	20 Sep
KOCR	----	20 Jun	----	20 Jun	8 Jun	----	11 Jun	----	20 Jun	14 Jun
LARE	----	10 Jun	17 Jun	15 Jun	8 Jun	----	24 May	May	5 Jun	14 Jun
LEDE	----	----	----	----	----	----	----	30 May	----	20 Jun
LERE	----	25 Jun	25 Jun	27 Jun	----	----	11 Jun	May	25 Jun	24 Jun
LEAL	----	----	----	----	----	----	----	----	----	----
LOOR	----	----	----	----	17 May	----	----	30 Apr	2 May	1 Jun
MACA	----	----	----	----	----	----	----	6 Jun	1 Jul	5 Jul
MAGL	----	----	----	----	----	----	----	30 May	----	----
MAGR	----	15 Jun	----	15 Jun	----	----	----	----	----	----
MATA	----	----	23 Jun	20 Jul	1 Jul	----	----	----	----	----
ORHY	----	----	----	----	----	----	----	----	----	----
OPPO	----	15 Jun	----	20 Jun	----	19 Jul	27 Jun	22 Jun	29 Jun	14 Jul
PHHO	----	----	10 Jun	15 Jun	----	----	24 May	30 Apr	2 May	2 Jun
PLPA	----	----	----	----	----	Jun	11 Jun	7 Jun	5 Jun	4 Jul
POSE	----	5 Jun	25 Jun	1 Jul	8 Jun	26 Jun	11 Jun	----	10 Jun	18 Jun
SIHY	----	15 Jul	10 Jul	15 Jul	Jun	----	11 Jun	19 Jun	17 Jun	6 Jul
SILI	----	----	----	----	----	----	----	----	----	----
SPCO	----	25 Jun	30 Jun	10 Jul	----	----	----	----	17 Jun	----
SPCR	----	----	30 Jun	----	----	----	----	----	----	----
STCO	----	25 Jun	5 Jul	10 Jul	Jun	----	11 Jun	----	29 Jun	2 Jul
STVI	----	----	----	3 Jul	----	----	----	23 Jun	29 Jun	----
TAOF	----	----	----	----	----	----	----	16 May	24 Apr	10 Jun
TRDU	----	----	----	----	----	----	11 Jun	26 Jun	19 Jun	----
VIAM	----	----	----	----	----	Jun	11 Jun	23 May	15 May	14 Jun
VINU	----	----	15 Jun	----	17 May	----	----	7 May	19 May	14 Jun
VUOC	----	----	----	----	Jun	----	11 Jun	----	10 Jun	29 Jun

TABLE VI. (Continued):

STUDY AREA BUD KIMBALL

Seed Dissemination

Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
AGCR	----	----	----	----	----	----	7 Aug	6 Sep	----	26 Jul
AGGL	----	----	----	----	----	----	----	30 Jun	29 Jun	25 Jul
AGSM	10 Aug	10 Aug	15 Aug	19 Aug	11 Aug	2 Sep	1 Sep	22 Aug	11 Aug	8 Aug
AGSP	----	----	----	----	20 Jul	10 Aug	9 Aug	----	29 Jun	26 Jul
ALTE	12 Jul	17 Jul	20 Jul	----	----	19 Jul	17 Jul	10 Jul	2 Jul	10 Jul
ANDI	----	----	----	----	----	----	17 Jul	11 Jul	29 Jun	28 Jul
ANOC	----	----	----	----	----	----	----	11 Jul	----	----
ARHO[2]	----	----	----	----	----	19 Jul	17 Jul	11 Jul	10 Jul	14 Jul
ARTR	----	Nov	Nov	Nov	----	1 Nov	----	----	----	----
ASPU	----	----	----	----	----	----	27 Jun	30 Jun	17 Jun	26 Jul
BOGR	----	----	----	----	----	2 Sep	----	----	----	----
BRJA	----	----	----	----	----	19 Jul	17 Jul	29 Jul	14 Jul	18 Jul
BRTE	----	----	20 Jul	30 Jul	1 Jul	19 Jul	27 Jun	24 Jul	10 Jul	12 Jul
CACH	----	----	----	----	1 Jul	----	----	13 Jul	14 Jul	26 Jul
CANU	----	----	----	----	----	10 Aug	1 Aug	26 Jul	3 Aug	26 Jul
CAAN	20 Jul	25 Jul	25 Jul	15 Jul	----	19 Jul	17 Jul	----	----	----
CHDE	----	----	----	----	----	2 Sep	Aug	14 Jul	----	----
CRMO	----	----	----	15 Jul	1 Jul	19 Jul	1 Jul	11 Jul	29 Jun	10 Jul
DEPI	----	----	25 Jul	25 Jun	----	19 Jul	27 Jun	4 Jul	29 Jun	15 Jul
ERPU	----	----	25 Jul	30 Jun	1 Jul	19 Jul	17 Jul	11 Jul	14 Jul	26 Jul
GIPU	----	----	----	----	----	----	9 Aug	2 Jul	----	----
HAGL	----	----	----	----	----	----	----	----	----	10 Oct
KOCR	20 Jul	10 Jul	----	25 Jul	20 Jun	----	17 Jul	----	28 Jul	29 Jun
LARE	20 Jul	25 Jul	25 Jul	25 Jul	20 Jul	19 Jul	27 Jun	14 Jul	4 Jul	26 Jul
LEDE	----	----	----	----	1 Jul	19 Jul	17 Jul	17 Jul	14 Jul	18 Jul
LERE	10 Jul	15 Jul	15 Jul	10 Jul	1 Jul	19 Jul	----	18 Jul	10 Jul	14 Jul
LEAL	----	----	----	----	----	----	17 Jul	----	----	----
LOOR	----	----	----	15 Jul	1 Jul	26 Jun	27 Jun	21 Jun	2 Jun	2 Jul
MACA	----	----	----	----	----	----	----	24 Jul	28 Jul	28 Jul
MAGL	----	----	----	----	----	----	----	20 Jul	----	----
MAGR	----	15 Jul	----	20 Jul	----	----	----	----	----	----
MATA	----	----	----	----	20 Jul	----	----	----	----	----
OPPO	Sep	30 Aug	15 Aug	5 Aug	11 Aug	----	9 Aug	11 Sep	25 Aug	12 Jul
ORHY	----	----	----	----	----	----	27 Jun	----	----	----
PHHO	----	----	----	17 Aug	1 Jun	----	17 Jul	6 Jul	29 Jun	29 Jun
PLPA	25 Jul	20 Jul	25 Jul	----	1 Jul	19 Jul	17 Jul	7 Aug	27 Jun	4 Jul
POSE	15 Jul	1 Jul	5 Jul	20 Jul	1 Jul	19 Jul	27 Jun	----	23 Jun	14 Jun
SIHY	20 Jul	30 Jul	30 Jul	30 Jul	1 Jul	10 Aug	17 Jul	24 Jul	28 Jul	4 Jul
SILI	----	----	----	----	----	10 Aug	27 Jun	----	----	----
SPCO	----	20 Jul	25 Jul	10 Aug	----	----	----	----	11 Aug	----
SPCR	----	----	27 Jul	----	----	----	----	----	----	----
STCO	25 Jul	30 Jul	30 Jul	5 Aug	1 Jun	19 Jul	17 Jul	----	14 Jul	1 Jul
STVI	----	----	----	20 Jul	20 Jul	----	----	29 Jul	14 Jul	----
TAOF	----	----	----	----	----	----	1 Jun	9 Jul	19 May	25 Jun
TRDU	----	----	----	----	----	10 Aug	17 Jul	1 Aug	18 Jul	20 Jul
VIAM	----	----	----	----	----	19 Jul	Jul	18 Jul	12 Jul	----
VINU	----	----	----	----	1 Jul	----	11 Jun	15 Jun	2 Jun	26 Jul
VUOC	----	----	----	----	1 Jul	19 Jul	17 Jul	----	12 Jul	10 Jul

TABLE VI. (Continued):

STUDY AREA CEDAR MOUNTAIN

Growth Initiation

Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
AGCR	----	5 Mar	Apr	Apr	20 Apr	Apr	Apr	13 Apr	Apr	Apr
AGSP	----	----	Apr	Apr	20 Apr	29 Apr	Apr	Apr	Apr	Apr
ARHO	----	----	----	----	20 Apr	----	----	----	----	Apr
ARHO[2]	----	Apr	----	Apr	----	----	Apr	12 Apr	Apr	Apr
ARSP	----	Apr	----	Apr	20 Apr	29 Apr	Apr	Apr	Apr	Apr
ARTR	----	24 May	15 May	May	19 May	29 Apr	Apr	Apr	Apr	25 Apr
ASPU	----	Apr	Apr	Mar	----	May	Apr	Apr	Apr	Apr
ATCO	----	May	May	May	19 May	Apr	Apr	16 Apr	Apr	Apr
ATGA	----	Apr	Apr	Apr	19 May	22 May	Apr	17 Apr	Apr	Apr
CELA	----	24 May	15 May	May	19 May	----	----	Apr	Apr	25 Apr
CHDE	----	----	----	----	----	----	----	----	----	Apr
CHVI	May	May	10 May	May	19 May	22 May	Apr	13 Apr	27 Apr	Apr
CORA	----	----	----	----	----	----	----	----	----	----
CRMO	----	----	----	----	----	----	----	Apr	----	----
CYMO	----	----	----	----	20 Apr	22 May	----	Apr	Apr	May
EROV	----	----	May	----	20 Apr	May	----	Apr	Apr	Apr
ERPU	----	----	10 May	Apr	20 Apr	----	----	----	----	----
HAAC	----	Apr	----	Apr	20 Apr	Jun	----	Apr	Apr	Apr
KOAM	----	11 Mar	Mar	Mar	Apr	Apr	----	25 Apr	Apr	29 Apr
LARE	----	----	----	----	----	----	----	----	----	May
OPPO	----	Apr	5 May	May	19 May	22 May	25 May	11 May	27 May	29 Apr
ORHY	----	5 Mar	----	Apr	Apr	Apr	----	Apr	----	Apr
PEFR	----	----	----	----	20 Apr	Apr	----	----	Apr	Apr
PHHO	----	Apr	----	Apr	20 Apr	Apr	----	----	Apr	Apr
PHLO	----	----	----	----	7 Jun	Apr	----	----	Apr	Apr
POSE	----	15 Mar	----	Mar	20 Apr	29 Apr	Apr	Apr	Apr	Apr
SAVE	----	----	----	----	----	Jun	----	----	----	----
SIAL	----	----	----	----	----	Apr	----	----	----	May
SIHY	----	10 Mar	----	----	20 Apr	Apr	----	12 Apr	Apr	Apr
SILI	----	----	----	----	May	Apr	----	----	Apr	May
SPCO	----	----	----	----	May	22 May	Apr	Apr	Apr	Apr
TAOF	----	----	----	----	----	----	----	----	Apr	Apr
TENU	----	Apr	10 May	Apr	19 May	22 May	----	Apr	27 Apr	Apr
TOIN	----	----	----	----	20 Apr	----	----	----	Apr	May

TABLE VI. (Continued):

STUDY AREA CEDAR MOUNTAIN

Full Bloom

Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
AGCR	Jun	17 Jun	Jun	20 Jun	Jun	----	24 Jun	5 Jul	18 Jul	1 Jul
AGSP	5 Jul	30 Jun	20 Jun	1 Jul	----	----	24 Jun	24 Jun	4 Jul	15 Jul
ARHO	----	----	----	----	----	----	----	----	----	2 Jul
ARHO[2]	Jun	5 Jun	----	3 Jun	----	----	----	19 May	15 May	2 Jun
ARSP	Jul	Jul	25 Jun	5 Jul	Jun	----	25 May	1 Jul	15 Jun	18 Jun
ARTR	Sep	Sep	Sep	Sep	----	----	31 Aug	Sep	25 Sep	----
ASPU	----	30 May	25 May	May	----	----	4 Jun	3 Jun	4 Jun	28 May
ATCO	Jul	25 Jun	Jul	----	----	----	24 Jun	18 Jun	20 Jun	9 Jul
ATGA	Jun	5 Jun	5 Jun	1 Jun	----	Jun	4 Jun	21 Jun	4 Jun	7 Jul
CELA	----	Jul	15 Jul	----	----	----	15 Jul	21 Jun	13 Aug	1 Aug
CHDE	----	----	----	----	----	----	----	23 Jun	----	14 Jun
CHVI	----	Aug	Aug	18 Aug	18 Aug	30 Aug	6 Aug	24 Aug	20 Aug	5 Aug
CORA	----	----	----	----	----	26 Jun	6 Aug	15 Jul	----	----
CRMO	----	----	----	----	----	----	----	17 Jun	----	----
CYMO	----	----	----	----	May	----	----	17 May	----	----
EROV	----	Jun	10 Jun	Jun	----	Jun	----	Jun	----	14 Jun
ERPU	Jun	15 Jun	----	20 Jun	----	----	----	16 Jul	----	2 Jul
HAAC	10 Jun	1 Jun	5 Jun	7 Jun	----	----	4 Jun	17 Jun	4 Jun	18 Jun
KOAM	----	Jul	10 Jul	----	----	----	24 Jun	14 Jul	18 Aug	18 Aug
LARE	----	----	----	----	----	----	4 Jun	5 Jun	----	16 Jun
OPPO	10 Jul	Jul	10 Jul	15 Jun	----	----	15 Jul	10 Jul	27 Jul	----
ORHY	20 Jun	20 Jun	----	20 Jun	----	----	----	21 Jun	----	----
PEFR	----	----	----	----	----	----	----	7 Jul	15 Jun	----
PHHO	----	30 May	30 May	5 Jun	----	----	4 Jun	29 May	24 May	2 Jun
PHLO	----	30 May	15 Jun	10 Jun	----	----	25 May	2 Jun	4 Jun	29 Jun
POSE	Jun	15 Jun	15 Jun	15 Jun	----	Jun	4 Jun	17 Jun	15 Jun	3 Jul
SAVE	----	----	----	----	----	----	----	----	----	----
SIAL	----	----	----	----	----	----	----	Jun	----	14 Jun
SIHY	28 Jun	15 Jun	20 Jun	15 Jun	----	----	24 Jun	29 Jun	22 Jun	3 Jul
SILI	----	25 May	----	1 Jul	----	Jun	25 May	1 Jun	15 Jun	29 Jun
SPCO	----	15 Jun	Jul	12 Jun	----	----	4 Jun	30 Jun	19 Jun	18 Jun
TAOF	----	----	----	----	----	----	----	----	----	16 Jun
TENU	Jul	Jul	Jul	----	----	----	24 Jun	7 Jul	----	15 Jul
TOIN	----	----	----	----	----	----	4 Jun	19 Jun	8 Jun	11 Jul

TABLE VI. (Continued):

STUDY AREA CEDAR MOUNTAIN

Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
	Seed Dissemination									
AGCR	----	----	Aug	10 Aug	19 Jul	20 Aug	6 Aug	20 Sep	10 Aug	10 Aug
AGSP	----	----	5 Aug	20 Aug	----	30 Aug	6 Aug	17 Aug	5 Aug	25 Jul
ARHO	----	----	----	----	----	----	----	----	----	25 Jul
ARHO[2]	----	----	----	5 Aug	----	8 Aug	24 Jun	24 Jul	27 Jun	20 Jul
ARSP	----	----	Jul	1 Aug	27 Jun	8 Aug	15 Jul	25 Aug	20 Jun	29 Jun
ARTR	----	----	----	Nov	5 Nov	----	----	----	----	----
ASPU	30 Jun	17 Jun	25 Jun	1 Jul	27 Jun	----	24 Jun	3 Aug	13 Jul	11 Jul
ATCO	----	----	----	1 Jul	----	----	6 Aug	Sep	25 Aug	10 Aug
ATGA	----	----	----	1 Aug	----	----	15 Jul	20 Sep	25 Aug	18 Sep
CELA	----	----	----	----	----	----	6 Aug	Sep	13 Sep	----
CHDE	----	----	----	----	----	----	----	Sep	----	----
CHVI	----	----	----	Sep	5 Nov	----	----	----	13 Sep	----
CORA	----	----	----	----	----	30 Aug	----	8 Sep	----	----
CRMO	----	----	----	----	----	----	----	11 Jul	----	----
CYMO	----	----	----	----	19 Jul	----	----	----	----	----
EROV	----	Aug	1 Aug	5 Aug	19 Jul	----	----	20 Sep	----	25 Jul
ERPU	Jul	Jul	Aug	20 Jul	----	----	----	----	Jun	----
HAAC	----	21 Jun	20 Jul	1 Jul	----	----	24 Jun	13 Jul	27 Jun	11 Jul
KOAM	----	----	Aug	----	----	----	6 Aug	20 Sep	1 Sep	----
LARE	----	----	----	----	----	----	----	14 Jul	----	11 Jul
OPPO	----	----	----	10 Aug	9 Sep	----	6 Aug	----	10 Sep	----
ORHY	Aug	----	25 Jul	1 Aug	----	17 Jul	----	28 Jul	----	25 Jul
PEFR	----	----	----	----	----	----	----	Aug	10 Aug	----
PHHO	28 Jun	20 Jun	Jul	30 Jun	----	----	24 Jun	11 Jul	27 Jun	11 Jul
PHLO	----	15 Jun	15 Jul	20 Jul	----	----	24 Jun	24 Jul	13 Jul	18 Jul
POSE	Jul	5 Jul	Jul	10 Jul	27 Jun	17 Jul	15 Jul	15 Aug	10 Jul	11 Jul
SAVE	----	----	----	----	----	----	----	----	----	----
SIAL	----	----	----	----	----	17 Jul	----	26 Jul	----	11 Jul
SIHY	1 Aug	Jul	Aug	10 Aug	----	17 Jul	15 Jul	11 Aug	13 Jul	20 Jul
SILI	28 Jun	----	----	----	----	8 Aug	1 Jul	25 Jul	5 Aug	11 Jul
SPCO	----	----	Aug	20 Jul	----	----	15 Jul	4 Aug	25 Aug	29 Jun
TAOF	----	----	----	----	----	----	Jun	----	15 Jun	25 Jul
TENU	----	----	Aug	20 Aug	----	30 Aug	15 Jul	Sep	----	5 Aug
TOIN	----	----	----	----	----	----	15 Jul	----	27 Jun	----

TABLE VI. (Continued):

STUDY AREA CUMBERLAND 3

Growth Initiation

Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
ACMI	----	----	----	----	----	----	----	----	Apr	30 Apr
AGGL	----	10 Mar	----	May	19 May	May	May	Apr	Apr	May
AGSM	----	Apr	Mar	Apr	Apr	Apr	Apr	Apr	Apr	Apr
AGSP	----	Apr	Mar	Apr	Apr	Apr	Apr	Apr	Apr	Apr
AMAL	----	20 May	----	May	19 May	May	May	Apr	Apr	May
ANDI	----	May	----	Apr	19 May	May	Apr	Apr	Apr	May
ANSE	----	----	----	----	----	----	----	----	----	----
ARHO	----	----	----	----	19 May	----	----	----	----	----
ARHO^2	----	May	----	May	----	Apr	----	Apr	Apr	May
ARTR	Jun	20 May	May	May	Sep	May	May	Apr	Apr	Apr
ASCA	----	----	----	----	----	----	----	----	----	----
ASCI	----	May	----	----	19 May	Jun	----	Apr	Apr	Apr
ASDI	----	Apr	----	May	----	----	----	Apr	Apr	Apr
ASMI	----	----	----	----	----	----	----	Apr	Apr	Apr
ASPU	----	----	----	----	19 May	May	----	Apr	Apr	Apr
ASMI^2	----	----	----	----	----	----	----	----	----	----
BRTE	----	----	----	----	----	----	----	----	----	May
CANU	----	----	----	----	----	----	----	Apr	----	May
CALI	----	12 Mar	----	May	May	Apr	----	Apr	----	May
CHAL	----	----	----	----	----	----	----	----	----	----
CHNA	----	----	----	----	Jun	----	----	----	----	----
CHVI	----	20 May	----	May	19 May	Apr	----	----	Apr	Apr
COPA	----	1 Jun	May	----	Apr	May	----	----	Apr	May
CORA	----	6 Jun	----	May	----	6 Jun	----	----	----	----
CRAC	----	30 May	----	May	----	----	----	Apr	Apr	Apr
CRFL	----	----	----	----	----	----	----	----	Apr	May
CYMO	----	----	----	----	----	----	----	----	Apr	May
DEPI	----	----	----	----	----	----	----	----	Apr	30 Apr
ERMI	----	14 May	May	May	19 May	Apr	----	----	Apr	Apr
EROV	----	12 Mar	----	----	----	----	----	----	----	----
ERSU	----	----	----	----	----	----	----	----	----	----
FRAT	----	----	----	----	----	----	----	----	----	----
KOCR	----	----	----	----	----	----	----	----	----	Apr
LARE	----	----	----	----	----	Apr	----	----	----	----
LEPE	----	----	----	----	----	May	----	----	----	----
LOSI	----	----	----	Apr	Apr	May	----	----	Apr	Apr
MACA	----	----	----	----	----	Jul	----	----	----	----
MELO	----	Apr	----	Apr	Apr	----	----	----	Apr	May
OPPO	----	May	May	May	19 May	May	22 May	30 May	26 May	2 Jun
ORHY	----	12 Mar	----	Mar	Apr	Apr	May	Apr	Apr	Apr
PELA	----	----	----	----	----	----	----	----	----	Apr
PHHO	----	Mar	----	----	----	May	----	----	Apr	Apr
PHLO	----	Mar	----	May	19 May	May	----	----	Apr	Apr
PHMU	----	----	----	----	19 May	----	----	----	----	30 Apr
POAM	----	----	----	----	----	----	----	----	Apr	Apr
POFE	----	Mar	----	Apr	19 May	Apr	----	----	Apr	Apr
POSE	----	Mar	----	Apr	Apr	Apr	----	----	Apr	Apr

TABLE VI. (Continued):

STUDY AREA CUMBERLAND 3

	Growth Initiation									
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
SEIN	----	----	----	----	----	May	----	Apr	Apr	Apr
SIAL	----	----	----	----	----	May	May	----	Apr	May
SIHY	----	----	----	----	19 May	Apr	----	----	Apr	Apr
SILI	----	----	----	----	May	Apr	----	----	Apr	----
STCO	----	----	----	Apr	Apr	May	May	Apr	Apr	Apr
STCO[2]	----	----	----	----	----	----	----	----	----	----
SYOC	----	----	----	----	19 May	May	May	----	Apr	May
TAOF	----	----	----	----	----	----	----	----	Apr	30 Apr
TECA	----	24 May	----	May	19 May	May	May	Apr	Apr	30 Apr
TRDU	----	----	----	----	----	Apr	----	----	----	----
TRGY	----	----	----	May	19 May	May	May	Apr	Apr	Apr
VINU	----	----	----	May	19 May	May	----	----	Apr	May
WYAM	----	----	----	----	----	May	----	----	----	----
ZIPA	----	12 Mar	----	Mar	Apr	Apr	----	Apr	Apr	Apr

TABLE VI. (Continued):

STUDY AREA CUMBERLAND 3

	Full Bloom									
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
ACMI	----	----	----	----	----	----	----	12 Jul	28 Jul	5 Aug
AGGL	15 Jun	10 Jun	----	10 Jun	----	Jun	5 Jun	11 Jun	5 Jul	18 Jun
AGSM	25 Jul	30 Jun	Jul	----	Apr	----	----	10 Jul	3 Jul	----
AGSP	28 Jun	25 Jun	Jul	20 Jul	----	----	25 Jun	6 Jul	3 Jul	13 Jul
AMAL	----	----	30 Jun	10 Jun	----	26 Jun	5 Jun	12 Jun	16 Jun	29 Jun
ANDI	----	Jun	----	1 Jun	7 Jun	----	5 Jun	24 May	30 May	2 Jun
ANSE	----	----	----	----	----	----	----	19 Jun	----	----
ARHO	----	----	----	----	----	----	----	----	----	----
ARHO[2]	Jun	24 May	Jun	1 Jun	----	6 Jun	----	Jun	20 May	6 Jun
ARTR	Sep	Sep	5 Aug	15 Sep	----	----	1 Sep	Sep	4 Oct	----
ASCA	----	10 Jul	----	----	----	----	----	----	----	----
ASCI	----	6 Jun	10 Jun	1 Jun	----	----	5 Jun	Jun	1 Jun	1 Jul
ASDI	5 Jul	6 Jun	Jun	3 Jul	----	----	5 Jun	23 May	----	12 Jun
ASMI	----	----	----	----	----	----	----	17 Jun	16 Jun	6 Jun
ASPU	----	----	----	----	----	6 Jun	----	Jun	----	15 Jun
ASMI[2]	----	10 Jun	12 Jun	----	----	----	Jul	----	----	----
BRTE	----	----	----	----	----	----	----	7 Jul	16 Jun	29 Jun
CANU	----	----	----	----	----	Jul	----	Jul	----	8 Jul
CALI	5 Jul	30 Jun	Jun	15 Jun	28 Jun	26 Jun	25 Jun	25 Jun	5 Jun	29 Jun
CHAL	----	----	----	----	----	----	----	13 Jul	----	----
CHNA	----	----	----	----	9 Aug	----	----	----	----	----
CHVI	5 Aug	15 Jul	Jul	5 Aug	9 Aug	8 Aug	15 Jul	15 Aug	14 Aug	11 Aug
COPA	----	14 Jun	Jun	1 Jul	28 Jun	----	22 May	22 Jun	8 Jun	25 Jun
CORA	----	----	----	10 Aug	----	8 Aug	7 Aug	9 Aug	----	----
CRAC	5 Jul	15 Jul	20 Jun	30 Jun	----	----	25 Jun	19 Jun	5 Jun	25 Jun
CRFL	----	----	----	----	----	----	----	13 Jul	30 May	17 Jun
CYMO	----	----	----	----	----	----	----	22 Jun	26 May	----
DEPI	----	----	----	----	----	----	5 Jun	----	5 Jun	8 Jun
ERMI	10 Aug	15 Jul	5 Aug	20 Aug	9 Aug	Aug	15 Jul	----	14 Aug	9 Aug
EROV	25 Jun	6 Jun	----	----	----	----	----	Jun	----	----
ERSU	----	25 Jun	----	----	----	----	----	----	----	----
FRAT	----	----	----	----	----	----	----	Jun	----	----
KOCR	----	----	----	----	----	----	----	----	----	29 Jun
LARE	----	----	----	----	----	----	----	17 Jun	10 Jun	----
LEPE	----	----	----	----	----	----	----	----	----	----
LOSI	----	----	----	----	----	1 Jun	22 May	Apr	5 Jun	5 Jun
MACA	----	----	----	----	----	8 Aug	----	----	----	----
MELO	5 Jul	30 May	15 Jun	15 Jun	May	----	----	5 May	26 May	2 Jun
OPPO	----	15 Jul	5 Jul	10 Aug	19 Jul	----	15 Jul	11 Jul	24 Jul	27 Jul
ORHY	5 Jul	30 Jun	----	10 Jun	----	----	1 Jul	7 Jul	14 Jul	----
PELA	20 Jun	15 Jun	25 Jun	----	----	----	----	Jun	----	10 Jun
PHHO	Jun	24 May	5 Jun	5 Jun	----	----	22 May	11 Jun	26 May	10 Jun
PHLO	Jun	6 Jun	15 Jun	15 Jun	----	Jun	22 May	14 Jun	16 Jun	1 Jul
PHMU	----	----	----	----	----	----	----	5 May	----	----
POAM	----	----	----	----	----	----	----	25 Jun	----	----
POFE	Jun	15 Jun	Jul	15 Jun	Jun	----	22 May	10 Jun	16 Jun	1 Jul
POSE	2 Jul	30 Jun	30 Jun	10 Jun	Jun	----	5 Jun	Jun	----	1 Jul

TABLE VI. (Continued):

STUDY AREA CUMBERLAND 3

	Full Bloom									
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
SEIN	----	----	----	----	----	Jun	5 Jun	10 Jun	5 Jun	29 Jun
SIAL	----	----	----	----	----	Jun	5 Jun	20 Jun	10 Jun	17 Jun
SIHY	5 Jul	1 Jul	----	----	----	----	25 Jun	9 Jul	30 Jun	3 Jul
SILI	----	----	----	----	----	Jun	5 Jun	----	16 Jun	25 Jun
STCO	----	Jun	Jun	Jun	----	----	25 Jun	4 Jul	30 Jun	----
STCO[2]	----	----	----	----	----	----	----	4 Jul	----	----
SYOC	----	----	----	----	----	----	25 Jun	1 Jul	3 Jul	----
TAOF	----	----	----	----	----	----	----	Jun	26 May	4 Jul
TECA	10 Aug	10 Jul	5 Aug	1 Aug	Jul	8 Aug	15 Jul	2 Aug	11 Aug	5 Aug
TRDU	----	----	----	----	----	Jul	25 Jun	18 Jul	5 Jul	----
TRGY	----	30 May	----	----	----	----	----	Jun	26 May	15 Jun
VINU	----	----	Jun	----	----	----	----	11 Jun	26 May	6 Jun
WYAM	----	----	----	----	----	----	----	----	----	----
ZIPA	----	8 Jun	12 Jun	10 Jun	7 Jun	----	5 Jun	23 Jun	5 Jun	4 Jul

TABLE VI. (Continued):

STUDY AREA CUMBERLAND 3

Seed Dissemination

Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
ACMI	----	----	----	----	----	----	----	15 Sep	25 Aug	----
AGGL	Aug	Jun	----	10 Jul	7 Jun	----	25 Jun	Aug	14 Jul	29 Jun
AGSM	20 Aug	5 Aug	Aug	----	----	8 Aug	7 Aug	19 Sep	11 Aug	11 Jul
AGSP	5 Aug	30 Jul	25 Jul	20 Aug	----	8 Aug	7 Aug	16 Aug	28 Jul	27 Jul
AMAL	----	----	----	10 Sep	9 Aug	----	15 Jul	23 Aug	14 Jul	10 Sep
ANDI	Jun	20 Jun	----	15 Jul	19 Jul	----	25 Jun	15 Jul	16 Jul	11 Jul
ANSE	----	----	----	----	----	----	----	30 Jul	----	----
ARHO	----	----	----	----	9 Aug	----	----	----	----	----
ARHO^2	5 Jul	10 Jul	Jul	1 Aug	----	17 Jul	15 Jul	10 Aug	14 Jul	11 Jul
ARTR	----	----	----	Nov	5 Nov	4 Nov	----	----	----	----
ASCA	----	----	----	----	----	----	----	----	----	----
ASCI	28 Jun	25 Jun	Jul	15 Jul	----	----	----	2 Aug	14 Jul	----
ASDI	30 Jul	15 Jul	Jul	20 Aug	----	----	25 Jun	15 Sep	----	11 Jul
ASMI	----	----	----	----	----	----	----	----	28 Jul	11 Jul
ASPU	----	----	----	----	28 Jun	17 Jul	----	12 Aug	26 May	13 Jul
ASMI^2	----	20 Jul	----	----	----	----	----	----	----	----
BRTE	----	----	----	----	----	----	15 Jul	26 Aug	28 Jul	8 Jul
CANU	----	----	----	----	----	----	----	27 Aug	----	9 Aug
CALI	25 Jul	----	Aug	20 Aug	9 Aug	8 Aug	7 Aug	Aug	28 Jul	10 Aug
CHAL	----	----	----	----	----	----	----	Sep	----	----
CHNA	----	----	----	----	7 Sep	----	----	----	----	----
CHVI	----	----	----	1 Oct	5 Nov	4 Nov	1 Sep	Sep	----	----
COPA	----	20 Jul	Jul	25 Aug	9 Aug	----	1 Jul	12 Aug	11 Aug	27 Jul
CORA	----	----	----	30 Aug	----	30 Aug	22 Sep	Sep	----	----
CRAC	14 Aug	----	Jul	14 Jul	----	----	15 Jul	1 Jul	14 Jul	25 Jul
CRFL	----	----	----	----	----	----	----	25 Aug	----	12 Aug
CYMO	----	----	----	----	----	----	----	27 Jul	----	----
DEPI	----	20 Jun	----	----	----	----	25 Jun	7 Aug	20 Jul	27 Jul
ERMI	----	----	----	30 Oct	5 Nov	4 Nov	1 Sep	----	12 Jul	----
EROV	14 Aug	10 Jul	----	----	----	----	----	----	----	----
ERSU	----	25 Jul	----	----	----	----	----	----	----	----
FRAT	----	----	----	----	----	----	----	3 Aug	----	----
KOCR	----	----	----	----	----	----	1 Sep	----	28 Jul	27 Jul
LARE	----	----	----	----	----	26 Jun	----	4 Aug	24 Jul	----
LEPE	----	----	----	----	----	8 Aug	----	----	----	----
LOSI	Jul	Jun	----	1 Jul	28 Jun	8 Aug	25 Jun	26 Jul	14 Jul	29 Jun
MACA	----	----	----	----	----	----	----	----	----	----
MELO	----	Jul	----	10 Aug	7 Jun	----	----	15 Jul	28 Jul	12 Jul
OPPO	----	----	Aug	20 Sep	9 Aug	----	7 Aug	15 Sep	12 Sep	----
ORHY	----	----	----	20 Aug	9 Aug	8 Aug	7 Aug	26 Aug	25 Aug	24 Jul
PELA	10 Aug	15 Jul	Jul	20 Aug	----	----	25 Jun	----	----	----
PHHO	10 Jul	20 Jul	Jul	10 Jul	----	26 Jun	25 Jun	3 Aug	4 Jul	27 Jul
PHLO	10 Jul	20 Jul	Jul	10 Jul	28 Jun	26 Jun	25 Jun	10 Aug	14 Jul	11 Jul
PHMU	----	----	----	----	28 Jun	----	----	4 Aug	----	----
POAM	----	----	----	----	----	----	----	20 Sep	----	----
POFE	25 Jul	10 Jul	25 Jul	1 Aug	28 Jun	8 Aug	15 Jul	28 Aug	28 Jul	8 Jul
POSE	15 Jul	5 Jul	Jul	15 Jul	28 Jul	17 Jul	15 Jul	21 Aug	----	11 Jul

TABLE VI. (Continued):

STUDY AREA CUMBERLAND 3

					Seed Dissemination					
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
SEIN	----	----	----	----	----	8 Aug	----	12 Aug	28 Jul	27 Jul
SIAL	----	----	----	----	----	17 Jul	15 Jul	12 Aug	20 Jul	25 Jul
SIHY	30 Jul	30 Jul	25 Jul	10 Aug	----	8 Aug	7 Aug	26 Aug	14 Jul	4 Aug
SILI	----	----	----	----	----	17 Jul	----	----	14 Jul	11 Jul
STCO	----	Jul	Jul	15 Jul	----	17 Jul	15 Jul	20 Aug	28 Jul	11 Jul
STCO[2]	----	----	----	----	----	----	----	23 Aug	----	----
SYOC	----	----	----	----	7 Sep	8 Aug	15 Jul	1 Sep	25 Aug	----
TAOF	----	----	----	----	----	----	----	15 Jul	14 Jul	20 Jul
TECA	----	----	----	30 Sep	7 Sep	30 Aug	1 Sep	20 Sep	----	10 Sep
TRDU	----	----	----	----	----	----	15 Jul	27 Aug	28 Jul	20 Jul
TRGY	28 Jun	20 Jun	----	----	----	----	----	4 Aug	14 Jul	27 Jul
VINU	----	Jun	Jul	----	----	----	----	----	----	8 Jul
WYAM	----	----	----	----	----	----	----	----	----	----
ZIPA	Jun	15 Jun	Jun	20 Jul	28 Jun	8 Aug	25 Jun	9 Aug	4 Jul	11 Jul

TABLE VI. (Continued):

STUDY AREA DEMER

	Growth Initiation									
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
AGSM	----	5 Mar	5 Mar	Mar	Mar	Apr	Apr	Mar	Apr	Apr
AGSP	----	5 Mar	1 Mar	Mar	Mar	Apr	Apr	Mar	Mar	Apr
ALTE	----	----	Apr	----	Apr	Apr	Apr	Mar	Apr	Apr
ARTR	----	20 May	22 Apr	Apr	23 Apr	25 May	28 Apr	7 Apr	15 Apr	Apr
ASMI	----	----	----	----	----	Jun	----	May	15 Apr	Apr
ASPU	----	----	----	----	----	----	28 Apr	----	13 Apr	----
BOGR	----	30 Mar	25 Apr	Apr	Mar	Apr	Apr	Mar	Mar	Apr
BRTE	----	----	Mar	Mar	Mar	----	Apr	Mar	Mar	Apr
CANU	----	----	----	----	----	May	----	Mar	Apr	Apr
CIUN	----	----	Apr	May	----	----	----	----	----	----
CRFE	----	----	----	----	----	----	----	----	----	----
CYMO	----	----	Mar	----	----	----	----	Mar	Mar	Apr
DEGE	----	25 Mar	5 May	Apr	23 Apr	Apr	Apr	Mar	Apr	----
DEPI	----	----	----	----	Apr	Apr	----	12 Apr	Apr	Apr
ERPU	----	Mar	----	----	----	----	----	----	Apr	Apr
GIPU	----	----	----	----	----	Jun	----	----	----	----
HOJU	----	----	----	----	----	----	----	----	----	----
KOCR	----	----	----	----	----	----	----	Mar	Apr	Apr
LASC	----	----	----	----	----	----	----	Jun	May	----
LARE	----	----	May	May	----	Apr	28 Apr	----	Apr	Apr
LEDE	----	----	May	May	May	25 May	----	12 Apr	Apr	Apr
LUPU	----	----	20 May	----	----	----	----	Apr	Apr	Apr
MACA	----	----	----	----	----	----	----	----	Apr	Apr
MATA	----	----	----	----	----	----	----	----	----	----
OPPO	----	28 Mar	----	Apr	23 Apr	25 May	28 Apr	30 Apr	Apr	Apr
ORHY	----	----	5 Mar	Mar	----	May	Apr	Apr	Mar	Apr
PHHO	----	----	----	----	----	----	----	Mar	Apr	Apr
PLPA	----	----	Mar	May	Apr	25 May	----	Apr	15 Apr	May
POSE	----	1 Mar	1 Mar	Mar	Mar	Apr	----	Mar	Mar	Apr
SAIB	Jun	----	----	Jun	----	----	----	----	----	----
SIAL	----	----	----	----	----	Apr	28 Apr	6 Apr	Apr	Apr
SIHY	----	5 Mar	1 Mar	Mar	Mar	----	----	Mar	Mar	Apr
SILI	----	----	Apr	May	17 May	----	----	----	----	----
SPCO	----	25 Apr	30 Apr	May	23 Apr	Apr	Apr	Apr	Apr	Apr
STCO	----	5 Mar	5 Mar	Mar	Mar	----	Apr	Apr	Apr	Apr
TAOF	----	----	----	----	----	----	----	----	Apr	Apr
TRDU	----	----	----	----	----	----	----	17 Apr	Apr	Apr
VUOC	----	----	Mar	May	----	Apr	----	Apr	Apr	May

TABLE VI. (Continued):

STUDY AREA DEMER

Full Bloom

Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
AGSM	20 Jun	25 Jun	5 Jul	----	----	----	----	----	20 Jun	----
AGSP	10 Jun	25 Jun	1 Jul	15 Jun	----	----	7 Jun	26 Jun	15 Jun	14 Jun
ALTE	----	----	10 Jun	----	May	May	24 May	21 May	15 May	14 Jun
ARTR	10 Sep	20 Sep	10 Sep	5 Sep	----	----	1 Sep	Sep	25 Sep	16 Oct
ASMI	----	----	----	----	----	----	7 Jun	Jun	----	14 Jun
ASPU	----	----	----	----	----	----	----	----	----	----
BOGR	5 Aug	5 Jul	15 Jul	12 Jul	----	Jun	27 Jun	May	15 Jul	25 Jul
BRTE	----	10 Jun	12 Jun	15 Jun	9 Jun	----	7 Jun	May	20 May	----
CANU	----	----	----	----	----	Jun	7 Jun	13 Jun	20 Jun	29 Jun
CHFR	----	----	----	----	----	----	7 Jun	22 Jun	29 Jun	----
CIUN	----	----	----	----	----	----	----	----	----	----
CRFE	----	----	----	----	----	----	----	----	----	----
CYMO	----	----	1 Jun	----	----	----	Jun	2 May	----	----
DEGE	30 Jul	10 Jun	20 Jun	15 Jun	9 Jun	----	24 May	31 May	6 Jun	----
DEPI	----	----	----	----	9 Jun	----	24 May	May	20 May	2 Jun
ERPU	----	----	----	----	----	----	7 Jun	24 May	17 Jun	29 Jun
GIPU	----	----	----	----	----	Jul	----	----	----	----
HOJU	----	----	----	----	----	----	Jun	----	----	----
KOCR	----	----	----	----	----	----	----	----	17 Jun	----
LASC	----	----	----	----	----	----	17 Jul	9 Aug	----	----
LARE	----	5 Jun	15 Jun	28 May	----	----	24 May	May	8 Jun	14 Jun
LEDE	----	----	----	Jun	----	Jun	Jun	4 Jun	13 May	14 Jun
LUPU	----	----	25 Jun	----	----	----	7 Jun	23 May	17 Jun	----
MACA	----	----	----	----	----	----	7 Jun	10 Jun	----	29 Jun
MATA	----	----	----	----	----	----	24 May	2 Jul	----	----
OPPO	----	25 Jun	----	Jun	----	20 Jul	7 Jun	12 Jun	20 Jun	24 Jun
ORHY	5 Jun	----	10 Jun	Jul	----	----	Jun	17 Jun	19 Jun	4 Jul
PHHO	----	----	----	----	----	----	----	27 Apr	2 May	18 May
PLPA	----	5 Jun	15 Jun	25 Jun	9 Jun	Jun	7 Jun	16 Jun	2 Jun	----
POSE	1 Jun	10 Jun	15 Jun	25 Jun	----	Jun	24 May	May	1 Jun	14 Jun
SAIB	----	----	----	----	----	----	----	----	----	----
SIAL	----	----	----	----	----	28 Jun	7 Jun	7 Jun	2 Jun	2 Jun
SIHY	----	25 Jun	15 Jun	15 Jun	----	----	7 Jun	5 Jun	17 Jun	14 Jun
SILI	----	----	May	10 Jul	9 Jun	----	----	----	----	----
SPCO	5 Jul	20 Jun	1 Jul	----	----	----	----	26 May	----	----
STCO	5 Jun	25 Jun	25 Jun	15 Jun	Jun	----	7 Jun	24 Jun	4 Jun	----
TAOF	----	----	----	----	----	----	----	6 May	7 May	10 Jun
TRDU	----	----	----	----	----	----	7 Jun	11 Jun	17 Jun	15 Jun
VUOC	----	10 Jun	12 Jun	25 Jun	----	----	24 May	27 May	2 Jun	16 Jun

TABLE VI. (Continued):

STUDY AREA DEMER										
Seed Dissemination										
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
AGSM	1 Nov	15 Aug	20 Aug	20 Aug	----	----	9 Aug	5 Sep	28 Jul	----
AGSP	1 Aug	30 Jul	5 Aug	30 Jul	11 Aug	20 Jul	17 Jul	5 Sep	14 Jul	25 Jul
ALTE	----	----	10 Jul	----	30 Jun	20 Jul	17 Jul	14 Jul	28 Jul	10 Jul
ARTR	15 Nov	15 Nov	10 Nov	Nov	----	1 Nov	----	----	----	----
ASMI	----	----	----	----	----	9 Aug	9 Aug	17 Aug	----	27 Jul
ASPU	----	----	----	----	----	----	27 Jun	----	----	----
BOGR	10 Aug	30 Jul	5 Aug	20 Aug	----	20 Jul	9 Aug	21 Jul	24 Aug	9 Aug
BRTE	24 Jun	5 Jul	10 Jul	30 Jul	30 Jun	20 Jul	27 Jun	21 Jul	25 Jul	27 Jul
CANU	----	----	----	----	----	20 Jul	9 Aug	8 Aug	30 Jul	9 Aug
CHFR	----	----	----	----	1 Oct	9 Sep	17 Jul	22 Aug	12 Sep	----
CIUN	----	----	----	----	----	----	----	----	----	----
CRFE	----	----	----	----	----	9 Aug	----	----	----	----
CYMO	----	----	20 Jun	----	----	----	----	13 Jun	----	----
DEGE	1 Aug	10 Jul	20 Jul	15 Jun	30 Jun	20 Jul	17 Jul	10 Jul	3 Aug	----
DEPI	----	----	----	----	----	20 Jul	17 Jul	16 Jul	4 Jul	20 Jul
ERPU	----	----	----	----	----	----	17 Jul	13 Jul	28 Jul	----
GIPU	----	----	----	----	----	2 Sep	Jul	----	----	----
HOJU	----	----	----	----	----	----	----	----	----	----
KOCR	----	----	----	----	----	----	17 Jul	----	14 Jul	29 Jun
LASC	----	----	----	----	----	----	1 Sep	18 Sep	12 Sep	----
LARE	Jul	15 Jul	20 Jul	20 Jul	20 Jul	9 Aug	27 Jun	16 Jul	5 Jul	1 Aug
LEDE	----	----	20 Jul	25 Jul	30 Jun	20 Jul	17 Jul	9 Jul	28 Jul	25 Jul
LUPU	----	----	20 Jul	----	----	----	9 Aug	9 Jul	14 Jul	----
MACA	----	----	----	----	----	----	17 Jul	----	----	1 Aug
MATA	----	----	----	----	----	----	----	----	----	----
OPPO	Aug	10 Aug	----	30 Jul	11 Aug	----	17 Jul	4 Sep	24 Aug	18 Sep
ORHY	20 Jul	----	20 Jul	Aug	20 Jul	9 Aug	17 Jul	13 Jul	28 Jul	1 Aug
PHHO	----	----	----	----	----	----	----	6 Jul	14 Jun	10 Jul
PLPA	10 Jul	15 Jul	29 Jul	10 Aug	30 Jun	20 Jul	9 Aug	1 Sep	28 Jul	10 Jul
POSE	1 Jul	1 Jul	1 Jul	10 Aug	30 Jun	20 Jul	27 Jun	12 Jul	24 Jul	29 Jun
SAIB	Jul	----	----	----	----	----	----	----	----	----
SIAL	----	----	----	----	----	----	17 Jul	2 Sep	10 Jul	18 Sep
SIHY	2 Aug	25 Jul	30 Jul	30 Jul	20 Jul	9 Aug	17 Jul	4 Sep	11 Aug	26 Jul
SILI	----	----	20 Jul	10 Aug	11 Aug	----	----	----	----	----
SPCO	30 Jul	15 Jul	25 Jul	----	----	----	----	14 Jul	----	----
STCO	25 Jul	20 Jul	20 Jul	30 Jul	20 Jul	20 Jul	17 Jul	28 Jul	28 Jul	5 Jul
TAOF	----	----	----	----	----	----	----	17 Jun	20 May	5 Jul
TRDU	----	----	----	---	----	9 Aug	27 Jun	25 Jul	14 Jul	25 Jul
VUOC	----	20 Jun	Jul	20 Jul	30 Jun	20 Jul	27 Jun	14 Jul	29 Jun	4 Jul

TABLE VI. (Continued):

					STUDY AREA FARSON					
					Growth Initiation					
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
AGSM	----	30 Mar	26 Apr	Apr	21 Apr	Apr	Apr	29 Apr	Apr	Apr
ALTE	----	----	----	Apr	21 Apr	Apr	----	----	Apr	----
ARHO	----	----	----	----	21 Apr	22 May	Apr	25 Apr	Apr	Apr
ARHO[2]	----	----	May	May	18 May	Apr	----	22 Apr	Apr	May
ARTR	----	20 May	10 May	15 May	21 Apr	22 May	4 May	13 Apr	Apr	Apr
ASPU	----	15 Mar	30 Apr	Apr	Jul	Apr	----	Apr	Apr	Apr
ASSP	----	15 Mar	30 Apr	----	----	----	----	Apr	Apr	Apr
ATCO	----	27 Apr	26 Apr	Apr	7 Jun	Apr	4 May	25 Apr	Apr	Apr
CAEL	----	15 Apr	20 May	Apr	21 Apr	Apr	May	26 Apr	Apr	Apr
CAMI	----	----	----	----	----	----	----	----	----	----
CELA	----	27 Apr	30 Apr	15 May	18 May	Apr	May	26 Apr	Apr	Apr
CHLE	----	----	----	----	----	Jun	----	----	----	----
CHFR	----	Apr	----	----	----	----	----	----	----	----
CHVI	May	Apr	15 May	25 Apr	18 May	Apr	May	28 Apr	Apr	Apr
CRFL	----	----	----	----	----	22 May	----	May	----	----
CYMO	----	----	May	Apr	21 Apr	22 May	---	Apr	Apr	----
DEPI	----	----	----	----	----	Apr	----	Apr	Apr	May
ERCE	----	----	----	----	10 Aug	22 May	5 May	3 May	15 May	----
EROV	----	Apr	10 May	5 May	18 May	Apr	Apr	16 Apr	Apr	Apr
GACO	----	----	Apr	----	----	----	----	----	----	----
GIPU	----	----	----	----	----	----	----	----	----	----
GRSP	----	Apr	15 May	25 Apr	18 May	Apr	Apr	26 Apr	Apr	Apr
HAAC	----	Apr	10 May	Apr	18 May	Apr	----	29 May	Apr	Apr
KOCR	----	----	15 May	Apr	21 Apr	22 May	----	27 Apr	----	Apr
LARE	----	----	----	----	----	Apr	----	Apr	Apr	----
LEPU	----	----	May	----	----	Jun	May	27 Apr	Apr	Apr
MACA	----	----	----	----	----	----	----	----	May	----
OPFR	----	----	----	----	----	----	----	----	----	30 Apr
OPPO	May	27 Apr	10 May	Apr	18 May	22 May	4 May	1 Jun	26 May	Apr
ORHY	----	15 Apr	5 May	Apr	21 Apr	22 May	May	30 Apr	Apr	Apr
PECL	----	----	30 Apr	May	18 May	Apr	----	----	Apr	Apr
PHHO	May	30 May	5 May	Apr	18 May	22 May	----	26 Apr	Apr	Apr
POSE	----	15 Apr	5 May	Mar	21 Apr	Apr	May	Apr	Apr	Apr
SIHY	----	30 Mar	30 Apr	Apr	21 Apr	Apr	----	Apr	Apr	Apr
SILI	May	Apr	May	Apr	----	Apr	----	Apr	Apr	May
SPCO	----	10 May	5 May	May	Jul	Apr	----	----	Apr	Apr
STCO	----	15 Apr	5 May	Apr	21 Apr	22 May	Apr	29 Apr	Apr	Apr
TECA	----	----	----	----	----	----	----	----	----	----
TESP	----	----	----	----	----	----	----	29 Apr	Apr	Apr
XASA	----	----	----	----	18 May	Apr	Apr	26 Apr	----	----

TABLE VI. (Continued):

STUDY AREA FARSON

Full Bloom

Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
AGSM	20 Jul	15 Jul	----	15 Jul	----	17 Jul	----	16 Jul	5 Jul	30 Jun
ALTE	----	----	25 Jun	25 May	----	7 Jun	Jun	18 Jun	16 Jun	15 Jun
ARHO	----	----	----	----	----	27 Jun	25 Jun	27 Jun	20 Jun	30 Jun
ARHO[2]	----	----	----	10 Jul	----	7 Jun	22 May	7 Jun	26 May	15 Jun
ARTR	10 Sep	21 Sep	10 Sep	10 Sep	----	----	2 Sep	----	----	----
ASPU	Jun	23 May	10 Jun	20 Jun	----	Jun	5 Jun	10 Jun	20 May	----
ASSP	----	27 Apr	----	----	----	----	----	6 Jun	1 Jun	----
ATCO	20 Jul	10 Aug	20 Jun	Jul	----	----	5 Jun	5 Jul	28 Jun	4 Jul
CAEL	----	25 May	----	20 May	May	7 Jun	5 Jun	29 Jun	5 Jun	1 Jun
CAMI	----	----	----	----	----	----	----	----	----	----
CELA	10 Aug	10 Sep	30 Jul	----	Sep	----	5 Jun	24 Jun	14 Jul	----
CHLE	----	----	----	----	----	----	----	17 Jul	----	----
CHFR	15 Aug	----	----	----	----	----	----	----	----	----
CHVI	15 Aug	24 Aug	10 Aug	5 Aug	----	----	16 Jul	23 Jul	28 Jul	25 Jul
CRFL	----	----	----	----	----	----	----	----	----	----
CYMO	----	----	Jun	----	----	----	----	1 Jun	20 May	----
DEPI	----	----	----	----	----	27 Jun	----	1 Jun	16 Jun	12 Jun
ERCE	----	----	----	----	----	17 Jul	16 Jul	26 Jun	28 Jul	15 Jun
EROV	5 Jul	10 Jul	15 Jun	10 Jul	----	27 Jun	5 Jun	26 Jun	30 Jun	30 Jun
GACO	----	----	----	----	----	----	----	----	----	----
GIPU	----	----	----	----	----	----	----	----	----	----
GRSP	----	----	5 Jun	25 Jul	----	----	----	26 Jun	14 Jul	25 Jun
HAAC	----	----	20 Jun	Jul	----	Jun	----	16 Jun	----	15 Jun
KOCR	----	----	----	20 Jun	----	Jun	5 Jun	3 Jul	----	28 Jun
LARE	----	----	----	----	----	Jun	----	----	16 Jun	----
LEPU	----	----	----	----	----	Jun	25 Jun	17 Jun	20 Jun	----
MACA	----	----	----	----	----	----	----	12 Aug	16 Jun	----
OPFR	----	----	----	----	----	----	----	----	11 Aug	----
OPPO	25 Jul	10 Jul	Jul	5 Jul	----	----	25 Jun	4 Jul	4 Jul	20 Jul
ORHY	Jun	25 Jun	5 Jul	10 Jul	----	----	25 Jun	6 Jul	22 Jun	25 Jun
PECL	6 Jun	15 Jun	5 Jun	----	Apr	Jun	22 May	13 Jun	----	10 Jun
PHHO	----	5 Jun	10 Jun	1 Jun	----	7 Jun	4 May	1 Jun	26 May	3 Jun
POSE	Jun	6 Jun	20 Jun	25 Jun	----	Jun	5 Jun	18 Jun	20 Jun	30 Jun
SIHY	Jun	25 Jun	5 Jul	10 Jul	----	Jun	25 Jun	1 Jul	25 Jun	3 Jul
SILI	----	5 Jun	5 Jun	May	27 Jun	Apr	5 Jun	17 Jun	16 Jun	12 Jun
SPCO	----	10 Jun	5 Jul	Jun	----	27 Jun	----	28 Jun	20 Jun	1 Jul
STCO	10 Jul	30 Jun	10 Jul	Jul	----	----	----	30 Jun	4 Jul	30 Jun
TECA	----	----	----	----	----	----	----	----	----	----
TESP	----	----	----	----	----	---	25 Jun	5 Jul	14 Jul	----
XASA	----	----	----	----	----	Jul	16 Jul	----	----	----

TABLE VI. (Continued):

STUDY AREA FARSON

Seed Dissemination

Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
AGSM	15 Oct	21 Sep	15 Oct	10 Sep	----	1 Sep	Aug	----	8 Aug	25 Jul
ALTE	----	----	Jul	10 Aug	----	17 Jul	----	15 Jul	20 Jul	----
ARHO	----	----	----	----	----	16 Aug	7 Aug	24 Aug	14 Jul	20 Jul
ARHO[2]	----	----	----	10 Aug	----	17 Jul	----	20 Jul	14 Jul	18 Jul
ARTR	15 Nov	15 Nov	15 Nov	Nov	----	3 Nov	----	----	----	----
ASPU	Jun	30 Jun	20 Jun	5 Aug	----	17 Jul	25 Jun	1 Aug	16 Jun	15 Jul
ASSP	----	15 Jun	----	----	----	----	----	12 Jul	16 Jun	----
ATCO	15 Oct	Oct	Oct	Aug	----	3 Nov	----	Sep	11 Aug	22 Jul
CAEL	----	10 Jul	----	5 Aug	----	----	25 Jun	10 Sep	20 Jul	20 Jul
CAMI	----	----	----	----	----	----	Jul	----	----	----
CELA	20 Oct	26 Oct	Oct	----	6 Nov	3 Nov	7 Aug	----	----	----
CHLE	----	----	----	----	----	3 Nov	----	21 Sep	----	----
CHFR	----	15 Jul	----	----	----	----	----	----	----	----
CHVI	15 Oct	25 Sep	Sep	20 Sep	6 Nov	3 Nov	2 Sep	20 Sep	4 Oct	5 Sep
CRFL	----	----	----	----	----	----	----	----	----	----
CYMO	----	----	Jul	----	----	----	----	----	----	----
DEPI	----	----	----	----	----	17 Jul	----	----	18 Jul	30 Jun
ERCE	----	----	----	----	----	3 Nov	Sep	----	----	----
EROV	25 Jul	10 Jul	Jul	20 Aug	----	1 Sep	7 Aug	26 Aug	25 Aug	23 Jul
GACO	----	----	----	----	----	----	----	----	----	----
GIPU	----	----	----	----	----	----	----	Jun	----	----
GRSP	----	10 Nov	1 Aug	20 Sep	----	1 Sep	----	8 Aug	5 Sep	25 Jul
HAAC	----	20 Jun	Jul	20 Aug	----	17 Jul	25 Jun	20 Jul	----	30 Jul
KOCR	----	----	----	20 Aug	----	----	25 Jun	7 Aug	24 Aug	30 Jul
LARE	----	----	----	----	----	17 Jul	----	14 Jul	14 Jul	----
LEPU	----	----	Aug	----	----	3 Nov	16 Jul	10 Aug	14 Jul	----
MACA	----	----	----	----	----	----	----	Sep	4 Oct	----
OPFR	----	----	----	----	----	----	----	----	----	----
OPPO	Sep	24 Aug	15 Aug	15 Aug	6 Nov	----	7 Aug	21 Sep	24 Aug	10 Sep
ORHY	14 Oct	15 Jul	30 Jul	10 Aug	----	16 Aug	7 Aug	22 Aug	28 Jul	15 Jul
PECL	----	Jul	Jul	1 Aug	----	17 Jul	Jul	20 Aug	----	28 Jul
PHHO	27 Jun	5 Jul	Jul	10 Aug	----	25 Jun	25 Jun	25 Jul	14 Jul	14 Jul
POSE	20 Jul	20 Jul	20 Jul	5 Aug	----	17 Jul	16 Jul	15 Jul	28 Jul	15 Jul
SIHY	10 Aug	15 Jul	5 Aug	20 Aug	----	17 Jul	7 Aug	13 Aug	28 Jul	22 Jul
SILI	10 Jul	Jul	5 Jul	Jul	----	17 Jul	16 Jul	24 Jul	13 Jul	23 Jul
SPCO	----	10 Aug	30 Jul	20 Aug	6 Nov	----	25 Jun	19 Aug	14 Jul	9 Aug
STCO	10 Aug	15 Jul	30 Jul	15 Aug	----	17 Jul	7 Aug	27 Jul	28 Jul	14 Jul
TECA	----	----	----	----	----	16 Aug	----	----	----	----
TESP	----	----	----	----	----	----	16 Jul	Sep	12 Sep	----
XASA	----	----	----	----	----	----	Aug	----	----	----

TABLE VI. (Continued):

STUDY AREA HORSE CREEK

	Growth Initiation								
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
AGSM	----	5 Mar	Apr	Apr	----	Apr	----	----	Apr	Apr
AGSP	----	5 Mar	Apr	Mar	Mar	Mar	----	----	Apr	Apr
ALTE	----	----	----	Apr	----	Apr	----	----	----	----
ANDI	----	----	----	----	----	Apr	Apr	Apr	Apr	----
ARFE	----	15 Apr	Apr	Apr	Mar	----	----	Apr	Apr	----
ARHO[2]	----	----	----	----	Mar	----	----	----	Apr	----
ARNO	----	14 May	15 May	May	23 Apr	----	Apr	Apr	Apr	Apr
ARTR	----	20 May	20 May	May	23 Apr	Apr	Apr	Apr	Apr	Apr
ASPU	----	Apr	Apr	----	23 Apr	----	Apr	----	----	----
BRCO	----	----	Apr	----	----	----	----	----	----	----
BRJA	----	----	----	----	----	----	----	----	----	----
BRTE	----	----	Apr	May	Mar	Mar	Apr	Apr	Apr	----
CAAN	----	20 Mar	Apr	Apr	Mar	Mar	Apr	Apr	Apr	----
CANU	----	30 May	Apr	May	----	----	----	----	----	----
CELA	----	25 Apr	10 May	May	Apr	Apr	Apr	Apr	Apr	----
CHDE	----	----	----	May	May	Apr	----	----	----	----
CIUN	----	----	----	----	23 Apr	----	Apr	Apr	Apr	----
COPA	----	----	May	May	23 Apr	Mar	----	Apr	Apr	----
CROC	----	----	May	Apr	----	Apr	Apr	Apr	Apr	Apr
CRBR	----	----	Apr	----	23 Apr	----	Apr	Apr	Apr	Apr
CRFL	----	----	----	----	23 Apr	----	----	----	----	----
CRKE	----	----	----	----	----	----	----	----	----	----
DEPI	----	----	----	May	Apr	Apr	28 Apr	13 May	Apr	Apr
ERCE	----	----	----	----	----	----	----	16 May	----	----
ERPU	----	Apr	Apr	May	----	Apr	----	----	Apr	Apr
GACO	----	----	May	Apr	23 Apr	----	Apr	17 Apr	----	Apr
HAAC	----	----	----	----	23 Apr	----	Apr	----	Apr	Apr
LARE	----	----	----	May	17 May	Apr	----	21 Apr	Apr	Apr
LASE	----	----	----	----	----	----	May	----	----	----
LEDE	----	----	----	----	----	Apr	----	----	----	----
LERE	----	----	----	----	----	----	----	----	----	----
LIIN	----	----	----	----	----	----	----	----	----	----
LOOR	----	----	Apr	----	----	Apr	Apr	----	Apr	Apr
MACA	----	30 Mar	----	May	----	May	----	6 May	May	Apr
MAGR	----	----	Jun	May	----	May	----	----	Apr	----
OPPO	----	----	May	Apr	23 Apr	Apr	28 Apr	1 May	Apr	5 May
ORHY	----	5 Mar	Apr	May	----	----	----	----	Apr	Apr
PECL	----	----	Apr	Apr	Apr	Apr	Apr	----	Apr	Apr
PHHO	----	----	Apr	Apr	23 Apr	Apr	28 Apr	----	Apr	Apr
POSE	----	20 Feb	10 Mar	Apr	Mar	Apr	----	----	Apr	Apr
RHTR	----	----	----	----	----	----	----	----	Apr	Apr
SAIB	26 Jun	20 Jun	15 Jun	Jun	23 Apr	----	----	----	----	----
SIHY	----	5 Mar	Apr	May	Mar	Mar	----	----	Apr	Apr
SPCO	----	----	----	May	23 Apr	Apr	Apr	----	Apr	Apr
STCO	----	10 Mar	Apr	May	Mar	Apr	Apr	----	Apr	Apr
TRDU	----	20 May	15 May	Apr	----	Apr	Apr	18 Apr	Apr	Apr
VINU	----	5 Mar	----	Apr	Apr	Apr	Apr	----	Apr	Apr
XASA	----	----	----	----	23 Apr	Mar	Apr	12 Apr	Apr	Apr
YUGL	----	----	----	----	17 May	----	28 Apr	----	2 May	Apr
ZIVE	----	20 Apr	Apr	Apr	Mar	Apr	Apr	----	Apr	Apr

TABLE VI. (Continued):

STUDY AREA HORSE CREEK

	Full Bloom									
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
AGSM	25 Jun	5 Jul	10 Jul	----	----	Jul	Jun	----	3 Jul	12 Jul
AGSP	20 Jun	30 Jun	5 Jul	10 Jun	Jun	Jun	24 May	----	20 Jun	5 Jul
ALTE	----	----	9 Jun	May	----	Jun	24 May	----	----	----
ANDI	----	----	----	----	----	----	24 May	15 May	3 Jun	----
ARFE	20 Jun	10 Jul	15 Jul	Jul	----	----	Jun	23 Jun	29 Jun	----
ARHO[2]	----	----	----	----	----	----	----	5 Jun	----	----
ARNO	20 Sep	20 Sep	15 Sep	10 Oct	----	----	2 Sep	17 Sep	15 Sep	30 Sep
ARTR	10 Sep	20 Sep	20 Sep	10 Oct	----	24 Sep	2 Sep	17 Sep	25 Sep	30 Sep
ASPU	----	20 May	25 Sep	----	----	----	7 Jun	----	3 Jun	18 Jun
BRCO	----	25 Jun	Jun	----	----	----	----	----	----	----
BRJA	----	----	----	----	----	----	----	----	29 Jun	14 Jun
BRTE	----	15 Jun	30 Jun	May	----	----	24 May	8 Jun	15 Jun	14 Jun
CAAN	----	5 Jun	10 Jun	10 Jun	8 Jun	Jun	7 Jun	25 May	3 Jun	29 Jun
CANU	20 Jun	15 Jun	5 Jul	Jun	----	30 Jun	7 Jun	8 Jun	----	25 Jun
CELA	25 Jul	20 Jul	20 Jul	25 Sep	----	20 Jul	9 Aug	25 Jul	28 Jul	----
CHDE	----	----	5 Jul	Jun	8 Jun	----	----	29 Jun	14 Jul	----
CIUN	----	----	----	----	----	----	27 Jun	22 Jul	29 Jun	29 Jun
COPA	----	----	30 Jun	----	17 May	----	----	----	----	----
CROC	----	25 May	25 Jun	10 Jun	----	30 Jun	----	----	15 Jun	20 Jun
CRBR	30 Jun	10 Jun	10 Jun	----	8 Jun	----	24 May	25 May	29 Jun	14 Jun
CRFL	----	----	----	----	----	----	----	----	----	----
CRKE	----	----	----	----	----	----	----	----	----	----
DEPI	30 Jun	----	5 Jun	10 Jun	May	Jun	24 May	10 Jun	15 May	2 Jun
ERCE	----	----	----	----	----	----	2 Sep	27 Jul	----	----
ERPU	25 Jun	20 Jun	25 Jun	7 Jun	----	30 Jun	24 May	29 Jun	15 Jun	20 Jun
GACO	----	5 Jun	30 Jun	Jun	8 Jun	----	27 Jun	13 Jun	5 Jul	----
HAAC	----	----	----	----	----	----	24 May	20 May	19 May	16 Jun
LARE	26 Jun	----	20 Jun	Jun	----	Jun	24 May	1 Jun	3 Jun	14 Jun
LASE	----	----	----	----	----	10 Aug	----	----	----	----
LEDE	----	----	----	----	----	----	----	----	----	----
LERE	----	----	30 Jun	----	----	----	----	----	----	----
LIIN	----	----	----	----	----	----	7 Jun	17 Jun	----	----
LOOR	----	----	5 Jun	----	----	----	24 May	31 May	25 May	----
MACA	25 Jun	20 Jun	----	10 Jul	----	20 Jul	7 Jun	10 Jul	29 Jun	----
MAGR	----	20 Jun	Jul	----	----	----	----	21 Jun	12 Jul	27 Jun
OPPO	5 Jun	20 Jun	9 Jun	1 Jul	----	30 Jun	27 Jun	15 Jun	29 Jun	4 Jul
ORHY	----	5 Jun	1 Jul	Jun	8 Jun	----	7 Jun	----	7 Jun	25 Jun
PECL	----	----	15 Jul	12 Jun	8 Jun	Jun	----	21 Jun	15 Jun	14 Jun
PHHO	----	30 May	5 Jun	10 Jun	----	25 May	24 May	7 May	2 May	18 May
POSE	----	20 Jun	25 Jun	15 Jun	8 Jun	----	24 May	----	4 Jun	14 Jun
RHTR	----	----	----	----	----	----	----	----	----	----
SAIB	----	25 Aug	5 Aug	25 Aug	17 Sep	----	18 Jul	----	----	----
SIHY	20 Jun	1 Jul	5 Jul	10 Jun	8 Jun	----	7 Jun	----	29 Jun	2 Jul
SPCO	----	5 Jul	5 Jul	10 Jun	8 Jun	----	7 Jun	Jun	----	12 Jul
STCO	20 Jun	1 Jul	1 Jul	15 Jun	Jun	----	7 Jun	----	10 Jun	2 Jul

TABLE VI. (Continued):

STUDY AREA HORSE CREEK

	Full Bloom									
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
TRDU	----	15 Jun	30 Jun	Jun	----	Jun	24 May	10 Jul	29 Jun	2 Jul
VINU	----	20 Jun	25 Jun	Jun	17 May	----	----	2 May	18 May	14 Jun
XASA	----	----	----	----	17 Sep	24 Sep	2 Sep	16 Aug	12 Sep	17 Sep
YUGL	----	----	----	----	8 Jun	----	----	16 Jun	----	----
ZIVE	----	30 May	30 May	23 May	----	----	27 Jun	----	2 May	16 Jun

TABLE VI. (Continued):

STUDY AREA HORSE CREEK

Seed Dissemination

Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
AGSM	10 Nov	20 Aug	20 Aug	15 Aug	----	3 Sep	Jul	----	11 Aug	9 Aug
AGSP	30 Jul	10 Jul	15 Jul	30 Jul	20 Jul	10 Aug	27 Jun	----	14 Jul	20 Jul
ALTE	----	----	10 Jul	20 Jul	----	20 Jul	27 Jun	----	----	----
ANDI	----	----	----	----	----	----	27 Jun	9 Jul	----	----
ARFE	1 Aug	15 Jul	20 Jul	10 Aug	30 Jun	----	18 Jul	----	12 Sep	----
ARHO[2]	----	----	----	----	8 Jun	----	----	17 Jul	29 Sep	28 Jul
ARNO	5 Nov	5 Nov	5 Nov	Nov	----	----	----	----	----	----
ARTR	20 Nov	10 Nov	5 Nov	Nov	----	----	----	----	----	----
ASPU	25 Jun	15 Jun	20 Jun	----	8 Jun	----	Jul	----	28 Jul	26 Jul
BRCO	2 Aug	25 Jul	20 Jul	----	----	----	----	----	----	----
BRJA	----	----	----	----	----	10 Aug	----	----	14 Jul	26 Jul
BRTE	25 Jul	5 Jul	10 Jul	5 Jul	30 Jun	20 Jul	27 Jun	12 Jul	----	9 Jul
CAAN	20 Jul	25 Jul	15 Jul	2 Jul	30 Jun	20 Jul	27 Jun	----	28 Jul	23 Jul
CANU	15 Jul	15 Jul	20 Jul	5 Aug	----	20 Jul	27 Jun	14 Jul	----	1 Aug
CELA	20 Sep	20 Sep	20 Sep	Nov	----	----	----	----	----	----
CHDE	----	----	25 Jul	Aug	----	3 Sep	27 Jun	----	25 Sep	----
CIUN	----	----	----	----	30 Jun	----	18 Jul	2 Sep	11 Aug	1 Aug
COPA	----	----	Jul	20 Sep	----	----	18 Jul	----	----	26 Jul
CROC	----	Jun	Jul	10 Jul	----	20 Jul	27 Jun	----	29 Jun	24 Jul
CRBR	2 Aug	5 Jul	10 Jul	----	30 Jun	----	18 Jul	17 Jul	19 May	20 Jul
CRFL	----	----	----	----	30 Jun	----	----	----	----	----
CRKE	----	----	----	----	----	----	----	----	----	----
DEPI	Jul	----	10 Jul	10 Jul	30 Jun	20 Jul	27 Jun	Jul	1 Jul	20 Jul
ERCE	----	----	----	----	----	----	----	Sep	----	----
ERPU	20 Jul	10 Jul	10 Jul	30 Jul	----	10 Jul	27 Jun	16 Jul	1 Aug	3 Aug
GACO	30 Jun	5 Aug	25 Jul	20 Aug	20 Jun	----	18 Jul	----	4 Aug	----
HAAC	----	----	----	----	8 Jun	----	Jun	5 Jun	10 Jun	18 Jul
LARE	23 Jul	----	25 Jul	25 Jul	30 Jun	20 Jul	27 Jun	----	25 Jul	26 Jul
LASE	----	----	----	----	----	----	----	----	----	----
LEDE	----	----	----	----	----	20 Jul	27 Jun	----	20 Jul	----
LERE	----	----	25 Jul	----	----	----	----	----	----	----
LIIN	----	----	----	----	----	----	----	28 Aug	----	----
LOOR	----	----	----	----	----	20 Jul	7 Jun	----	3 Jun	----
MACA	25 Jul	25 Jul	----	20 Aug	----	----	18 Jul	----	14 Jul	----
MAGR	----	Jul	----	25 Aug	----	----	----	----	25 Aug	4 Aug
OPPO	----	20 Aug	10 Sep	10 Aug	20 Jul	24 Sep	18 Jul	21 Aug	12 Sep	17 Sep
ORHY	5 Aug	15 Jul	25 Jul	15 Aug	20 Jul	24 Sep	27 Jun	----	14 Jul	20 Jul
PECL	----	----	----	----	30 Jun	----	27 Jun	24 Jul	5 Jul	28 Jul
PHHO	26 Jun	15 Jun	5 Jul	25 Jun	30 Jun	30 Jun	27 Jun	22 Jul	25 Jun	7 Jul
POSE	15 Jul	5 Jul	5 Jul	5 Aug	30 Jun	10 Aug	27 Jun	----	14 Jul	9 Jul
RHTR	----	----	----	----	----	----	----	----	----	----
SAIB	----	Sep	----	Sep	----	----	----	----	----	----
SIHY	5 Aug	10 Jul	15 Jul	30 Jul	10 Aug	----	18 Jul	----	28 Jul	26 Jul
SPCO	1 Aug	25 Jul	25 Jul	25 Jul	10 Aug	20 Jul	----	----	----	28 Aug
STCO	5 Aug	15 Jul	15 Jul	15 Aug	20 Jun	----	27 Jun	17 Jul	14 Jul	20 Jul

TABLE VI. (Continued):

STUDY AREA HORSE CREEK

Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
	Seed Dissemination									
TRDU	----	15 Jul	15 Jul	15 Jul	----	20 Jul	27 Jun	26 Jul	28 Jul	9 Jul
VINU	25 Jun	10 Jul	10 Jul	15 Jul	8 Jun	----	----	28 Jun	3 Jun	9 Aug
XASA	----	----	----	----	----	----	----	----	----	----
YUGL	----	----	----	----	30 Jun	----	----	Jul	----	----
ZIVE	10 Jul	10 Jul	10 Jul	20 Jun	8 Jun	20 Jul	----	----	6 Jun	9 Aug

TABLE VI. (Continued):

STUDY AREA MESA ANTELOPE										
Growth Initiation										
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
AGSM	----	30 Mar	Mar	Apr	21 Apr	Apr	Apr	26 Apr	Apr	Apr
ALTE	----	----	----	----	21 Apr	----	----	----	----	Apr
ARNO	----	----	Jun	----	----	----	----	----	----	----
ARHO	----	----	----	----	Aug	----	----	----	----	----
ARHO[2]	----	----	----	May	----	Apr	----	Apr	Apr	May
ARTR	May	23 May	May	May	21 Apr	22 May	Apr	Apr	Apr	Apr
ASCI	----	----	----	----	----	May	----	----	----	----
ASPU	----	----	----	----	----	----	----	----	----	----
ASSP	----	----	----	May	21 Apr	22 May	----	Apr	Apr	Apr
ATGA	----	----	----	May	----	Jun	----	Apr	Apr	19 May
CAEL	----	May	May	Apr	21 Apr	22 May	May	23 Apr	Apr	Apr
CELA	May	20 May	May	May	May	Apr	May	Apr	Apr	Apr
CHVI	May	23 May	May	May	May	22 May	----	Apr	Apr	Apr
CORA	----	----	----	----	----	Jun	----	----	Apr	----
ERCA[2]	----	Mar	----	Apr	May	22 May	----	Apr	May	Apr
ERCE	----	----	----	----	----	----	----	----	----	Apr
EROV	----	Mar	----	May	21 Apr	22 May	Apr	Apr	Apr	----
GIPU	----	----	----	----	----	----	----	----	----	Apr
HAAC	----	----	----	Apr	21 Apr	May	Apr	Apr	Apr	----
LARE	----	----	----	----	----	----	----	----	----	----
LEAL	----	----	----	----	----	----	----	----	----	----
LEPU	----	May	May	----	May	May	Apr	Apr	Apr	Apr
LOOR	----	----	----	----	----	----	----	May	Apr	Apr
MACA	May	----	----	Jun	May	May	May	Apr	Apr	----
MATA	----	----	----	----	May	----	----	----	----	----
OPPO	----	May	----	May	May	22 May	4 May	11 May	26 May	30 Apr
ORHY	----	30 Mar	----	Apr	21 Apr	22 May	May	23 Apr	Apr	Apr
PELA	----	----	----	May	21 Apr	----	----	----	Apr	Apr
PHHO	----	30 Mar	----	Apr	21 Apr	22 May	----	Apr	Apr	Apr
POFE	----	-----	----	----	----	22 May	----	Apr	Apr	Apr
POSE	----	Mar	----	Apr	21 Apr	Apr	Apr	23 Apr	Apr	Apr
SIHY	----	Mar	----	Apr	21 Apr	Apr	Apr	24 Apr	Apr	Apr
SILI	----	----	----	Apr	----	Apr	----	----	Apr	Apr
SPCO	----	----	---	----	----	Jun	----	----	May	Apr
STCO	----	30 Mar	----	Apr	21 Apr	Apr	----	27 Apr	Apr	Apr
TRGY	----	----	----	Apr	May	22 May	----	Apr	Apr	Apr

TABLE VI. (Continued):

STUDY AREA MESA ANTELOPE

	Full Bloom									
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
AGSM	Jul	Jul	Jul	----	----	----	----	----	----	----
ALTE	----	----	----	----	----	----	----	18 Jun	----	15 Jun
ARNO	----	----	----	----	----	----	----	----	----	----
ARHO	----	----	----	----	----	----	----	----	----	----
ARHO^2	Jun	----	15 Jun	Jun	----	6 Jun	5 Jun	19 Jun	16 Jun	3 Jun
ARTR	10 Sep	20 Sep	10 Sep	10 Sep	7 Sep	Aug	1 Sep	Aug	4 Oct	----
ASCI	----	----	----	----	----	6 Jun	----	----	----	----
ASPU	----	----	15 Jun	----	----	----	----	----	----	----
ASSP	----	----	15 Jun	----	----	6 Jun	Jun	18 Jun	20 Jun	----
ATGA	1 Aug	----	----	25 Jul	----	26 Jun	----	----	----	----
CAEL	Jun	Jun	Jun	20 Jun	----	6 Jun	5 Jun	----	----	----
CELA	1 Aug	Aug	Jul	25 Aug	----	----	5 Jun	15 Jul	5 Jun	30 Jun
CHVI	10 Sep	Sep	1 Sep	30 Aug	9 Aug	8 Aug	15 Jul	10 Jul	24 Aug	1 Aug
CORA	----	----	----	----	----	----	----	22 Jul	15 Aug	----
ERCA^2	----	25 May	15 Jun	20 Jul	Jun	26 Jun	22 May	Jul	16 Jun	20 Jun
ERCE	----	----	----	----	----	----	----	24 Jul	30 Jun	25 Jun
EROV	Jun	30 May	20 Jun	13 Jul	----	26 Jun	5 Jun	26 Jun	20 Jun	30 Jun
GIPU	----	----	----	----	----	----	----	19 Jun	----	----
HAAC	----	----	15 Jun	12 Jun	----	26 Jun	5 Jun	18 Jun	16 Jun	18 Jun
LARE	----	----	----	----	----	----	----	Jun	----	----
LEAL	----	----	----	----	----	----	Jun	----	----	----
LEPU	Jun	15 Jun	30 Jun	----	----	26 Jun	5 Jun	3 Jul	5 Jul	----
LOOR	----	----	----	----	May	----	22 May	18 Jun	1 Jun	18 Jun
MACA	18 Aug	1 Jun	20 Jun	20 Aug	9 Aug	8 Aug	7 Aug	25 Jul	28 Jul	9 Aug
MATA	----	----	----	----	----	----	----	----	----	----
OPPO	1 Aug	Jul	Jul	20 Jul	19 Jul	Jul	15 Jul	17 Jul	5 Jul	10 Jul
ORHY	10 Jul	30 Jun	5 Jul	1 Jul	Jun	----	25 Jun	11 Jul	30 Jun	25 Jun
PELA	17 Jul	Jul	----	22 Jul	Sep	----	7 Aug	1 Jul	16 Jun	----
PHHO	----	12 May	15 Jun	10 Jun	7 Jun	6 Jun	22 May	May	26 May	4 Jun
POFE	----	----	----	----	----	Jun	5 Jun	23 Jun	20 Jun	1 Jul
POSE	20 Jun	10 Jun	30 Jun	20 Jun	----	26 Jun	25 Jun	21 Jun	27 Jun	30 Jun
SIHY	Jul	Jul	Jul	1 Jul	28 Jun	----	25 Jun	9 Jul	25 Jun	----
SILI	30 Jun	----	Jun	10 Jun	----	26 Jun	4 Jun	19 Jun	16 Jun	20 Jun
SPCO	----	----	----	----	----	Jun	----	----	----	----
STCO	10 Jul	Jul	Jul	1 Jul	19 Jul	----	25 Jun	7 Jul	4 Jul	----
TRGY	----	----	5 Jun	----	----	----	----	14 Jun	10 Jun	----

TABLE VI. (Continued):

STUDY AREA MESA ANTELOPE

Seed Dissemination

Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
AGSM	Sep	Aug	10 Aug	----	----	----	----	----	28 Jul	----
ALTE	----	----	----	----	28 Jun	----	----	24 Jul	----	5 Jul
ARNO	----	----	----	----	----	----	----	----	----	----
ARHO	----	----	----	----	----	----	----	----	----	----
ARHO^2	Jul	----	Jul	5 Aug	----	17 Jul	Jul	26 Jul	14 Jul	23 Jul
ARTR	14 Oct	5 Nov	5 Nov	10 Nov	5 Nov	4 Nov	----	----	----	----
ASCI	----	----	----	----	----	----	----	----	----	----
ASPU	----	----	Jul	----	----	----	----	----	----	----
ASSP	----	----	Jul	Oct	----	----	15 Jul	25 Jul	28 Jul	----
ATGA	----	----	----	30 Sep	----	8 Aug	----	----	----	----
CAEL	Jul	Jul	Jul	Aug	19 Jul	8 Aug	25 Jun	----	11 Aug	----
CELA	Oct	Oct	25 Oct	Oct	5 Nov	4 Nov	15 Jul	Aug	4 Oct	12 Sep
CHVI	14 Oct	Oct	Oct	Oct	5 Nov	30 Aug	7 Aug	21 Sep	12 Sep	10 Sep
CORA	----	----	----	----	----	----	----	12 Aug	14 Jul	----
ERCA^2	10 Aug	20 Jun	Jul	Oct	19 Jul	8 Aug	25 Jun	----	14 Jul	27 Jul
ERCE	----	----	----	----	----	----	----	----	14 Jul	----
EROV	25 Jul	Jul	Jul	Oct	----	8 Aug	25 Jun	Aug	14 Jul	24 Jul
GIPU	----	----	----	----	----	----	----	26 Jul	----	----
HAAC	Jul	----	Jul	13 Jul	----	17 Jul	25 Jun	25 Jul	8 Jul	30 Jun
LARE	----	----	----	----	----	----	----	23 Jul	----	----
LEAL	----	----	----	----	----	----	----	----	----	----
LEPU	Jul	Jul	10 Aug	----	----	8 Aug	15 Jul	12 Aug	14 Jul	----
LOOR	----	----	----	----	----	----	----	----	30 Jun	----
MACA	----	Oct	1 Oct	5 Sep	5 Nov	4 Nov	1 Sep	17 Sep	24 Aug	----
MATA	----	----	----	----	----	----	----	----	----	----
OPPO	Sep	Sep	Aug	30 Sep	7 Sep	----	7 Aug	21 Sep	24 Aug	5 Sep
ORHY	10 Aug	----	1 Aug	20 Aug	5 Nov	8 Aug	15 Jul	3 Aug	28 Jul	18 Jul
PELA	----	----	----	20 Aug	5 Nov	----	1 Sep	9 Sep	20 Aug	----
PHHO	20 Jul	20 Jun	30 Jul	30 Jul	28 Jun	17 Jul	25 Jun	25 Jul	14 Jul	18 Jul
POFE	----	----	----	----	----	8 Aug	15 Jul	26 Jul	14 Jul	12 Jul
POSE	1 Aug	----	Jul	20 Aug	28 Jun	17 Jul	15 Jul	28 Jul	8 Jul	12 Jul
SIHY	5 Aug	----	4 Aug	15 Aug	19 Jul	17 Jul	15 Jul	12 Aug	14 Jul	20 Jul
SILI	10 Jul	----	----	10 Aug	----	17 Jul	----	----	14 Jul	10 Jul
SPCO	----	----	----	----	----	----	----	----	----	----
STCO	15 Aug	----	Jul	1 Aug	7 Sep	17 Jul	15 Jul	3 Aug	14 Jul	14 Jul
TRGY	15 Jul	----	20 Jun	----	----	----	----	----	30 Jun	----

TABLE VI. (Continued):

STUDY AREA OWL DRAW Growth Initiation										
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
ACLA	----	----	----	----	----	----	----	----	----	----
ACMI	----	----	----	----	----	----	----	May	Apr	Apr
AGGL	----	----	----	----	----	----	----	----	Apr	Apr
AGSM	----	----	Apr	Apr	17 Apr	Apr	Apr	----	Apr	Apr
AGSP	----	----	Apr	Mar	17 Apr	Apr	Apr	----	Apr	Apr
ALCE	----	----	----	----	----	----	----	----	----	----
ALTE	----	----	----	----	Mar	Apr	Apr	----	Apr	Apr
ANRO	----	----	----	----	Apr	26 May	----	----	----	----
ARHO	----	----	----	----	Apr	May	Apr	----	Apr	Apr
ARHO[2]	----	----	----	May	Mar	May	----	----	----	Apr
ARNO	----	30 May	May	May	18 May	26 May	Apr	22 Apr	15 Apr	Apr
ARTR	----	30 May	May	May	16 May	26 May	Apr	19 Apr	15 Apr	Apr
ASPU	----	----	Apr	Apr	Apr	Apr	Apr	Apr	Apr	Apr
AST	----	----	Apr	Apr	Apr	Apr	----	----	----	----
ASDR	----	----	Apr	Apr	Apr	----	Apr	----	May	Apr
ASMI[2]	----	----	Apr	Apr	Apr	Apr	----	----	Apr	Apr
BASA	----	5 Jun	1 Jun	May	Apr	Apr	Apr	Apr	Apr	Apr
CACH	----	----	----	Apr	17 Apr	Apr	Apr	Apr	Apr	Apr
CAMI	----	----	----	----	----	----	----	----	----	----
CANU	----	May	May	May	17 Apr	----	Apr	Apr	Apr	Apr
CELA	----	----	May	May	15 May	----	Apr	Apr	Apr	Apr
CHDO	----	----	----	----	----	May	----	Apr	----	Apr
CHVI	----	May	May	May	17 May	----	----	Apr	Apr	Apr
CIUN	----	----	----	----	Apr	May	May	Apr	May	Apr
CORA	----	----	----	----	----	----	----	----	----	----
CRBR	----	----	----	----	----	----	----	Apr	Apr	Apr
CRMO	----	May	May	May	Apr	Apr	Apr	Apr	Apr	----
CYMO	----	May	May	May	Apr	Apr	----	----	Apr	Apr
DEPI	----	Jun	----	----	----	----	----	May	May	Apr
DOCO	----	Jun	----	----	Apr	----	----	Apr	----	Apr
EROC	----	----	----	May	17 Apr	Apr	----	Apr	Apr	Apr
GICO	----	----	----	----	----	----	----	May	----	May
GRSQ	----	----	----	----	----	----	----	May	----	----
HAAC	----	May	May	May	17 Apr	Apr	Apr	Apr	Apr	Apr
JUOS	----	May	May	May	16 May	----	Apr	May	Apr	Apr
JUSC	----	May	May	May	16 May	26 May	----	----	----	----
KOCR	----	----	Apr	Apr	17 Apr	26 May	Apr	Apr	Apr	Apr
LARE	----	----	----	----	----	----	----	May	May	May
LASC	----	----	----	----	----	----	Apr	----	----	----
LERE	----	----	----	May	17 Apr	26 May	----	Apr	Apr	Apr
LILE	----	May	May	Jun	17 Apr	Apr	Apr	----	Apr	May
MAVI	----	----	----	----	----	----	----	----	----	----
MAGR	----	May	May	Jun	17 Apr	----	----	Apr	Apr	----
MELO	----	----	----	----	----	26 May	Apr	Apr	Apr	Apr
OPPO	----	----	May	May	16 May	26 May	5 May	29 May	25 May	1 May
ORHY	----	----	Apr	Apr	17 Apr	26 May	Apr	----	15 Apr	Apr
OXLA	----	----	----	----	----	----	----	Apr	Apr	Apr

TABLE VI. (Continued):

STUDY AREA OWL DRAW

Growth Initiation

Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
PECL	----	----	----	----	17 Apr	Apr	Apr	Apr	Apr	Apr
PELA	----	----	May	May	----	----	----	----	Apr	Apr
PHHO	----	----	May	May	17 Apr	26 May	Apr	Apr	Apr	Apr
PHMU	----	----	----	----	----	----	----	----	Apr	apr
POFE	----	----	Apr	Apr	17 Apr	Apr	Apr	Apr	Apr	Apr
POSE	----	----	Apr	Apr	17 Apr	Apr	----	Apr	Apr	Apr
SECA	----	----	May	Apr	Apr	Apr	Apr	May	----	----
SELA	----	----	----	Apr	17 Apr	Apr	May	May	----	----
SPCO	----	----	Apr	Apr	16 May	Apr	----	May	Apr	Apr
STCO	----	----	Apr	Apr	17 Apr	----	Apr	Apr	15 Apr	Apr
STVI	----	----	----	----	----	----	----	Apr	----	Apr
TAOF	----	----	----	----	----	----	----	May	Apr	Apr
TRDU	----	----	----	Jun	----	----	----	May	Apr	Apr
TRGY	----	----	----	----	Apr	Apr	Apr	Apr	Apr	Apr
VIAM	----	----	May	May	Apr	Apr	----	May	Apr	Apr
VINU	----	----	----	----	Mar	Apr	Apr	----	Apr	Apr
XASA	----	----	----	----	----	Apr	Apr	Apr	----	Apr
ZIVE	----	----	----	----	----	Apr	Apr	Apr	Apr	Apr

TABLE VI. (Continued):

STUDY AREA OWL DRAW

Full Bloom

Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
ACLA	----	----	----	----	----	----	----	----	----	----
ACMI	----	----	----	----	----	----	----	----	----	----
AGGL	----	----	----	----	----	----	----	8 Jun	15 Jun	30 Jun
AGSM	16 Jul	5 Jul	17 Jul	17 Jul	----	----	28 Jun	Jun	----	----
AGSP	5 Jul	5 Jul	14 Jul	Jul	----	Jul	----	15 Jun	2 Jul	1 Jul
ALCE	----	----	----	----	----	----	10 Aug	28 Jul	13 Jul	----
ALTE	----	----	----	----	----	----	25 May	11 Jun	15 Jun	11 Jul
ANRO	----	----	----	----	----	----	----	----	----	----
ARHO	----	1 Jun	15 Jul	14 Jul	----	1 Jul	----	19 Jun	15 Jun	11 Jul
ARHO[2]	----	----	Jun	Jun	----	----	----	May	----	23 Jun
ARNO	----	20 Sep	20 Sep	5 Sep	----	29 Sep	Sep	22 Sep	1 Sep	4 Sep
ARTR	----	20 Sep	20 Sep	5 Sep	18 Sep	29 Sep	Sep	24 Sep	25 Sep	16 Oct
ASPU	----	May	25 May	10 Jun	----	9 Jun	26 May	21 May	20 May	14 Jun
AST	----	Jun	10 Jun	10 Jun	----	----	----	----	----	----
ASDR	----	Jun	10 Jun	15 Jul	----	----	----	20 Jun	10 Aug	20 Jun
ASMI[2]	----	Jun	10 Jun	Jul	----	1 Jul	25 May	26 Jun	8 Jul	20 Jun
BASA	----	Jun	Jun	Jun	16 May	Jun	Jun	1 Jun	8 Jul	14 Jun
CACH	----	----	6 Jun	25 Jun	----	1 Jul	25 May	4 Jun	15 Jun	28 Jun
CAMI	----	----	----	----	----	----	----	----	15 Jun	----
CANU	16 Jul	4 Jul	14 Jul	1 Jul	2 Jul	----	28 Jun	30 Jun	28 Jun	12 Jul
CELA	----	Jun	5 Jul	30 Jul	Jul	11 Aug	----	7 Jul	15 Aug	----
CHDO	----	----	----	----	----	1 Jul	----	21 Jun	27 Jul	----
CHVI	Aug	Aug	Aug	25 Aug	12 Aug	----	----	----	11 Sep	15 Aug
CIUN	----	----	----	----	----	----	28 Jun	22 Jun	28 Jun	2 Jul
CORA	----	----	----	----	----	11 Aug	----	----	----	----
CRBR	----	Jun	Jun	----	----	----	12 Jun	10 Jun	15 Jun	30 Jun
CRMO	----	Jun	Jun	Jun	----	----	12 Jun	6 Jun	15 Jun	Jun
CYMO	----	Jun	5 Jun	10 Jun	May	Jun	----	30 Apr	20 May	21 Jun
DEPI	Jul	Jun	----	----	----	----	----	4 Jun	8 Jun	14 Jun
DOCO	Jul	Jun	----	----	16 May	----	----	6 May	----	1 Jun
EROC	----	----	10 Jun	5 Jun	May	1 Jul	25 May	18 May	15 Jun	30 Jun
GICO	----	----	----	----	----	----	----	19 Jun	----	4 Jul
GRSQ	----	----	----	----	----	11 Aug	10 Aug	12 Aug	----	----
HAAC	----	10 Jun	15 Jun	Jun	----	1 Jul	12 Jun	2 Jun	15 Jun	22 Jun
JUOS	----	Jul	5 Jul	15 Jul	----	----	----	----	----	----
JUSC	----	Jul	5 Jul	15 Jul	----	----	----	----	----	----
KOCR	Jul	5 Jun	Jun	Jun	----	1 Jul	----	15 Jun	28 Jun	5 Jul
LARE	----	----	----	----	----	----	----	5 Jun	8 Jun	14 Jun
LASC	----	----	----	----	----	----	----	----	----	----
LERE	20 Jul	20 Jun	5 Jul	Jun	17 Apr	----	Jun	15 Jun	15 Jun	28 Jun
LILE	----	Jun	25 Jun	1 Jul	----	1 Jul	Jun	11 Jun	----	----
MAVI	----	Jul	1 Jul	----	----	----	----	----	----	----
MAGR	----	15 Jun	10 Jun	Jun	----	----	28 Jun	4 Jul	28 Jun	----
MELO	----	----	----	----	----	Jun	25 May	8 May	15 May	8 Jun
OPPO	----	Jun	Jun	10 Jul	----	----	----	28 Jun	28 Jun	3 Jul
ORHY	----	25 Jun	Jun	10 Jul	----	----	----	23 Jun	4 Jul	8 Jul
OXLA	----	----	----	----	----	----	12 Jun	26 May	25 May	1 Jul

TABLE VI. (Continued):

STUDY AREA OWL DRAW

Full Bloom

Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
PECL	----	25 Jun	Jun	10 Jul	----	Jun	----	3 Jun	15 Jun	28 Jun
PELA	----	Jun	30 Jun	1 Jul	----	----	----	10 Jun	15 Jun	14 Jun
PHHO	----	1 Jun	1 Jun	5 Jun	----	9 Jun	May	7 May	1 May	1 Jun
PHMU	----	----	----	----	----	----	----	25 May	8 Jun	10 Jun
POFE	----	15 Jun	10 Jun	10 Jun	May	----	25 May	25 May	8 Jun	4 Jul
POSE	----	17 Jun	10 Jun	8 Jun	----	----	25 May	1 Jun	15 Jun	4 Jul
SECA	10 Jul	10 Jun	15 Jun	3 Jun	----	----	25 May	1 Jun	----	----
SELA	----	----	30 Jun	1 Jul	----	Jul	Jun	17 Jun	----	----
SPCO	----	25 Jun	25 Jun	25 Jun	----	1 Jul	----	Jun	28 Jun	----
STCO	----	25 Jun	25 Jun	25 Jun	----	----	28 Jun	22 Jun	8 Jun	4 Jul
STVI	----	----	----	----	----	----	----	23 Jun	----	8 Jul
TAOF	----	----	----	----	----	----	----	6 Jun	----	14 Jun
TRDU	----	----	Jun	20 Jul	----	----	12 Jun	28 Jun	----	----
TRGY	----	----	Jun	5 Jun	----	----	----	26 May	20 May	14 Jun
VIAM	----	10 Jun	15 Jun	Jun	----	1 Jul	12 Jun	5 Jun	15 Jun	14 Jun
VINU	----	----	----	----	16 May	Jul	----	----	25 May	----
XASA	----	----	----	----	----	----	10 Aug	25 Jul	27 Jul	4 Sep
ZIVE	----	----	----	----	----	----	----	----	8 Jun	----

TABLE VI. (Continued):

	STUDY AREA OWL DRAW									
	Seed Dissemination									
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
ACLA	----	----	----	----	----	4 Sep	19 Jul	----	----	----
ACMI	----	----	----	----	----	----	----	----	----	----
AGGL	----	----	----	----	----	----	----	----	----	11 Jul
AGSM	----	5 Aug	25 Jul	Oct	12 Aug	4 Sep	10 Aug	Sep	28 Jun	----
AGSP	3 Aug	25 Jul	28 Jul	25 Aug	18 Jul	4 Sep	----	20 Aug	10 Aug	1 Aug
ALCE	----	----	----	----	----	----	----	----	11 Sep	----
ALTE	----	----	----	----	12 Aug	29 Sep	12 Jun	21 Jul	13 Jul	27 Aug
ANRO	----	----	----	----	18 Jul	----	28 Jun	----	----	----
ARHO	----	20 Jun	30 Jul	1 Aug	18 Jul	24 Jul	Jun	13 Aug	27 Jul	18 Aug
ARHO^2	----	Jul	25 Jul	30 Jul	2 Jul	----	----	9 Jul	28 Jun	3 Aug
ARNO	----	----	----	Nov	17 Nov	----	22 Sep	----	----	----
ARTR	----	----	----	Nov	17 Nov	----	22 Sep	----	----	----
ASPU	----	Jul	20 Jul	25 Jul	2 Jul	11 Aug	12 Jun	21 Jul	10 Aug	3 Aug
AST	----	Jul	30 Jul	10 Aug	18 Jul	11 Aug	----	----	----	----
ASDR	----	Jul	10 Jul	25 Aug	2 Jul	----	----	23 Jul	----	10 Aug
ASMI^2	----	Jul	10 Jul	15 Aug	2 Jul	4 Sep	----	----	4 Jul	3 Aug
BASA	----	Jul	Jul	12 Jul	2 Jul	24 Jul	12 Jun	13 Jul	28 Jun	1 Jul
CACH	----	Jul	28 Jul	25 Jul	2 Jul	24 Jul	28 Jun	27 Jul	10 Aug	3 Aug
CAMI	----	Jul	14 Jul	----	----	1 Jul	----	----	----	----
CANU	----	10 Aug	Aug	10 Aug	18 Jul	11 Aug	19 Jul	16 Aug	10 Aug	27 Aug
CELA	----	Sep	20 Sep	Sep	----	----	----	23 Aug	24 Aug	----
CHDO	----	----	----	----	----	24 Jul	----	----	1 Sep	----
CHVI	----	Sep	25 Sep	10 Oct	----	----	----	----	----	----
CIUN	----	----	----	----	12 Aug	11 Aug	Aug	9 Aug	13 Jul	----
CORA	----	----	----	----	----	4 Sep	----	----	----	----
CRBR	----	Jul	Jul	----	----	----	19 Jul	17 Aug	10 Aug	3 Aug
CRMO	----	Jul	14 Jul	17 Jul	2 Jul	24 Jul	28 Jun	22 Jul	28 Jun	8 Jul
CYMO	----	Jun	1 Jul	20 Jul	2 Jul	24 Jul	----	27 Jun	15 Jun	20 Jul
DEPI	----	Jul	----	----	----	----	----	11 Jul	27 Jul	7 Aug
DOCO	----	Jul	----	----	2 Jul	----	----	8 Jul	----	7 Jul
EROC	----	----	20 Jul	21 Jul	2 Jul	24 Jul	28 Jun	11 Jul	13 Jul	29 Jun
GICO	----	----	----	----	----	----	19 Jul	29 Aug	----	4 Jul
GRSQ	----	----	----	----	----	----	----	----	----	11 Jul
HAAC	Jul	10 Jul	5 Jul	20 Jul	2 Jul	24 Jul	Jul	10 Jul	28 Jun	11 Jul
JUOS	----	Aug	Aug	Oct	2 Jul	----	28 Jun	----	11 Sep	----
JUSC	----	Aug	Aug	Oct	18 Jul	----	----	----	----	----
KOCR	1 Aug	15 Jun	20 Jul	20 Aug	2 Jul	24 Jul	28 Jun	17 Aug	13 Jul	29 Jul
LARE	----	----	----	----	----	----	----	----	28 Jun	3 Aug
LASC	----	----	----	----	----	4 Sep	----	----	----	----
LERE	Aug	10 Jul	20 Jul	15 Jul	2 Jul	24 Jul	Jun	22 Jul	11 Sep	15 Jul
LILE	----	Jul	25 Jul	10 Aug	2 Jul	24 Jul	19 Jul	28 Jul	10 Aug	3 Aug
MAVI	----	Jul	Jul	----	----	----	----	----	----	----
MAGR	20 Jul	Jul	Jul	10 Aug	12 Aug	11 Aug	19 Jul	24 Aug	25 Sep	20 Sep
MELO	----	----	----	----	----	----	----	Aug	25 Sep	----
OPPO	----	Aug	Aug	10 Jul	----	----	10 Aug	30 Aug	11 Sep	27 Aug
ORHY	----	10 Jul	25 Jul	5 Aug	18 Jul	24 Jul	19 Jul	28 Jul	10 Aug	20 Jul
OXLA	----	----	----	----	----	----	28 Jun	31 Jul	10 Aug	3 Aug

TABLE VI. (Continued):

STUDY AREA OWL DRAW

Seed Dissemination

Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
PECL	----	10 Jul	25 Jul	5 Aug	2 Jul	24 Jul	12 Jun	3 Aug	10 Aug	10 Jul
PELA	----	Jul	20 Jul	15 Aug	----	----	----	26 Jul	13 Jul	7 Aug
PHHO	----	25 Jun	10 Jul	15 Jul	2 Jul	1 Jul	12 Jun	22 Jul	8 Jun	4 Jul
PHMU	----	----	----	----	----	----	----	28 Jul	15 Jun	24 Jul
POFE	20 Jul	10 Jul	Jul	30 Jul	2 Jul	24 Jul	12 Jun	23 Jul	13 Jul	7 Jul
POSE	20 Jul	10 Jul	Jul	25 Jul	2 Jul	11 Aug	12 Jun	19 Jul	28 Jun	5 Jul
SECA	----	----	----	12 Jul	2 Jul	11 Aug	Jun	22 Jul	----	----
SELA	----	Jul	25 Jul	25 Aug	2 Jul	11 Aug	----	19 Aug	----	----
SPCO	----	10 Jul	15 Jul	30 Jul	----	----	----	3 Aug	24 Aug	----
STCO	----	10 Jul	15 Jul	30 Jul	2 Jul	24 Jul	19 Jul	15 Aug	10 Aug	24 Jul
STVI	----	----	----	----	----	----	----	13 Aug	----	3 Aug
TAOF	----	----	----	----	----	----	----	16 Jul	----	4 Jul
TRDU	----	----	5 Jul	2 Jul	2 Jul	24 Jul	28 Jun	7 Aug	13 Jul	20 Jul
TRGY	----	----	----	----	2 Jul	1 Jul	----	18 Jul	15 Jun	8 Jul
VIAM	10 Jul	15 Jun	5 Jul	Jul	2 Jul	----	----	----	4 Jul	14 Jul
VINU	----	----	----	----	2 Jul	----	----	----	----	----
XASA	----	----	----	----	----	----	----	----	----	----
ZIVE	----	----	----	----	----	----	----	----	----	11 Jul

TABLE VI. (Continued):

STUDY AREA RED WASH

Growth Initiation

Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
AGSM	----	30 Mar	Mar	Apr	20 Apr	29 Apr	Apr	Apr	Apr	Apr
AGSP	----	28 Mar	Mar	Mar	Apr	29 Apr	Apr	Apr	Apr	Apr
ALTE	----	May	----	May	Apr	22 May	----	----	Apr	----
ARCO	----	----	----	----	----	----	----	----	----	----
ARHO	----	30 Mar	----	Jun	10 May	22 May	6 May	Apr	Apr	Apr
ARHO[2]	----	----	----	----	----	----	----	Apr	Apr	Apr
ARNO	----	May	----	----	----	----	----	----	----	----
ARTR	----	May	May	May	20 May	29 Apr	Apr	Apr	Apr	Apr
ASDI	----	----	May	Apr	Apr	22 May	----	Apr	Apr	Apr
ASKE	Jun	May	----	May	Jun	22 May	May	30 Apr	Apr	----
ASPU	----	May	May	Apr	Apr	22 May	----	Apr	Apr	Apr
CELA	----	May	May	May	20 May	29 Apr	----	Apr	Apr	----
CHDO	----	30 Mar	May	Apr	20 May	22 May	May	Apr	Apr	May
CHNA	----	1 Jun	Jun	May	20 May	29 Apr	Apr	1 May	Apr	Apr
CHVI	----	May	Jun	May	20 May	29 Apr	Apr	Apr	Apr	Apr
CORA	----	----	----	----	----	----	----	----	May	----
CRFL	----	May	May	May	Apr	22 May	----	Apr	Apr	May
CYMO	----	----	----	----	Apr	22 May	----	Apr	Apr	Apr
DEPI	----	May	----	----	----	----	----	----	----	----
ERAS	----	May	May	Apr	Apr	----	----	----	Apr	May
ERCE	----	----	----	----	----	----	----	----	Apr	20 May
ERBR	----	May	----	May	Apr	22 May	----	11 May	1 May	----
EROV	----	May	May	May	20 May	29 Apr	----	Apr	Apr	Apr
GIAG	----	----	----	Apr	----	----	----	----	----	----
GICO	----	----	----	----	May	Jun	Apr	----	Apr	Apr
GRSP	----	May	May	May	Apr	22 May	Apr	Apr	Apr	29 Apr
HAAC	----	Mar	----	Apr	20 May	----	Apr	24 Apr	Apr	Apr
LEPU	----	----	----	May	20 May	22 May	----	Apr	Apr	May
MACA	----	----	----	May	Aug	----	----	----	Apr	May
MAGR	----	----	----	----	----	----	----	Apr	May	May
OPPO	----	----	----	May	20 May	22 May	21 May	18 May	20 May	20 May
ORFA	----	May	----	May	15 Aug	----	----	23 Apr	Apr	----
ORHY	----	11 Mar	Mar	Apr	Apr	May	Apr	24 Apr	Apr	Apr
PECL	----	----	----	----	----	----	----	Apr	Apr	Apr
PELA	----	Mar	----	Apr	Apr	29 Apr	----	----	----	----
PHHO	----	Mar	----	Apr	Apr	29 Apr	----	Apr	Apr	Apr
POSE	----	11 Mar	Mar	Apr	20 Apr	Apr	----	Apr	Apr	Apr
SIHY	----	30 Mar	Mar	Apr	----	Apr	----	----	Apr	----
SILI	----	----	----	May	Apr	22 May	----	----	May	May
STCO	----	Mar	20 Mar	Apr	20 Mar	22 Mar	Apr	20 Apr	Apr	Apr
TECA	----	May	May	May	20 May	29 Apr	----	Apr	Apr	Apr
TOIN	----	----	----	----	----	----	----	Apr	Apr	Apr
VINU	----	----	----	----	Apr	22 May	----	----	Apr	May

TABLE VI. (Continued):

STUDY AREA RED WASH

Full Bloom

Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
AGSM	Jul	Jul	Jul	Jul	----	----	----	Jul	Jul	----
AGSP	Jul	Jul	Jul	15 Jun	----	----	24 Jun	30 Jun	4 Jul	13 Jul
ALTE	----	5 Jun	15 Jun	10 Jun	----	----	4 Jun	8 Jun	15 Jun	----
ARCO	----	----	25 Jun	----	----	----	----	----	----	----
ARHO	30 Jun	6 Jun	6 Jul	15 Jul	27 Jun	----	Jul	28 Jun	15 Jun	----
ARHO^2	----	----	----	----	----	----	May	31 May	4 Jun	16 Jun
ARNO	----	Aug	----	----	----	----	----	----	----	----
ARTR	----	Aug	Aug	10 Sep	9 Sep	----	31 Aug	----	3 Oct	----
ASDI	----	1 Jun	Jul	15 Jun	----	Jun	21 May	30 Jun	15 Jun	18 Jun
ASKE	----	1 Jun	----	18 Aug	----	----	Jul	16 Jul	15 Jun	30 Jul
ASPU	20 Jun	7 Jun	1 Jun	30 May	5 Jun	----	Jun	24 May	4 Jun	4 Jul
CELA	----	5 Aug	Aug	25 Aug	----	Jun	14 Jul	21 Jul	25 Aug	----
CHDO	30 Jul	7 Jun	Jul	30 Jun	----	----	24 Jun	29 Jun	29 Jun	11 Jul
CHNA	Aug	Aug	----	30 Aug	15 Aug	28 Aug	31 Aug	20 Aug	13 Sep	5 Aug
CHVI	Aug	Aug	Aug	10 Aug	15 Aug	Aug	6 Aug	17 Aug	10 Aug	1 Aug
CORA	----	----	----	----	----	----	6 Aug	Jul	----	----
CRFL	30 Jun	20 Jun	26 Jun	12 Jul	15 Jul	Jun	4 Jun	28 Jun	29 Jun	30 Jun
CYMO	----	----	----	----	----	----	May	May	----	----
DEPI	Jun	----	----	----	----	----	----	----	----	----
ERAS	20 JUn	5 Jun	13 Jun	15 Jun	Jun	----	21 May	27 May	4 Jun	16 Jun
ERCE	----	----	----	----	----	----	----	17 Jul	----	----
ERBR	----	5 Jul	----	22 Jul	15 Aug	28 Aug	14 Jul	5 Jul	10 Aug	----
EROV	25 Jun	30 Jun	30 Jun	20 Jun	Jun	17 Jul	4 Jun	22 Jun	29 Jun	5 Jul
GIAG	25 Jun	15 Jun	----	10 Jun	----	----	----	----	----	----
GICO	----	----	----	----	6 Jun	Jun	15 Jul	19 Jun	15 Jun	4 Jul
GRSP	Jun	5 Aug	10 Jul	----	----	5 Jun	Jun	----	13 Jul	15 Jul
HAAC	25 Jun	5 Jun	20 Jun	10 Jun	----	----	4 Jun	14 Jun	----	16 Jun
LEPU	28 Jun	15 Jun	30 Jun	15 Jun	27 Jun	----	24 Jun	30 Jun	15 Jun	5 Jul
MACA	----	10 Aug	----	18 Aug	Sep	28 Aug	6 Aug	15 Aug	25 Aug	19 Sep
MAGR	----	----	----	----	----	----	----	29 Jul	25 Aug	7 Aug
OPPO	----	Jul	Jul	Jul	15 Jul	28 Aug	14 Jul	3 Jul	13 Jul	3 Aug
ORFA	----	10 Jun	----	Jun	Sep	----	----	----	----	----
ORHY	10 Jul	5 Jul	5 Jul	Jun	Jun	----	24 Jun	29 Jun	29 Jun	28 Jun
PECL	----	----	----	----	----	----	----	1 Jul	29 Jun	14 Jun
PELA	30 Jun	15 Jun	30 Jun	20 Jun	27 Jun	Jun	4 Jun	----	----	----
PHHO	----	1 Jun	5 Jun	10 Jun	----	Jun	21 May	28 May	4 Jun	10 Jun
POSE	Jun	25 Jun	Jun	Jun	----	Jun	----	27 Jun	29 Jun	28 Jun
SIHY	----	Jul	Jul	30 Jun	----	----	----	2 Jul	13 Jul	6 Jul
SILI	20 Jun	1 Jun	20 Jun	10 Jun	6 Jun	----	4 Jun	4 Jun	15 Jun	20 Jun
STCO	Jul	Jul	Jul	30 Jun	----	----	24 Jun	1 Jul	29 Jun	30 Jun
TECA	Aug	Jul	5 Aug	23 Jul	15 Aug	4 Aug	14 Jul	24 Jul	25 Aug	1 Aug
TOIN	----	----	----	----	----	----	----	26 Jun	4 Jun	28 Jun
VINU	----	----	----	----	----	----	----	----	----	28 Jun

TABLE VI. (Continued):

STUDY AREA RED WASH

Seed Dissemination

Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
AGSM	Aug	5 Aug	Aug	10 Aug	----	----	----	----	5 Aug	----
AGSP	Aug	30 Jul	Aug	10 Sep	----	----	6 Aug	30 Aug	30 Jul	23 Jul
ALTE	Jul	Jul	25 Jul	10 Jul	15 Aug	4 Aug	----	5 Aug	----	----
ARCO	----	----	----	----	----	----	----	----	----	----
ARHO	Jul	20 Jun	Aug	10 Aug	15 Aug	28 Aug	6 Aug	11 Aug	20 Jul	----
ARHO[2]	----	----	----	----	----	----	25 Jun	7 Aug	13 Jul	15 Jul
ARNO	----	Oct	----	----	----	----	----	----	----	----
ARTR	----	Oct	Oct	Nov	4 Nov	6 Nov	21 Sep	----	----	----
ASDI	----	Aug	Jul	18 Aug	----	----	----	11 Aug	----	11 Jul
ASKE	----	Aug	----	Oct	----	----	31 Aug	Sep	27 Jul	----
ASPU	Jul	20 Jun	Jul	20 Jul	27 Jun	17 Jul	24 Jun	24 Jul	13 Jul	25 Jul
CELA	----	----	----	Oct	4 Nov	6 Nov	Sep	----	3 Oct	----
CHDO	----	1 Aug	----	15 Aug	----	17 Jul	14 Jul	28 Jul	25 Aug	20 Jul
CHNA	----	----	----	Oct	4 Nov	6 Nov	----	----	----	10 Sep
CHVI	----	----	----	Oct	4 Nov	6 Nov	31 Aug	----	----	1 Sep
CORA	----	----	----	----	----	----	Sep	17 Sep	----	----
CRFL	----	5 Aug	Jul	18 Aug	15 Aug	4 Aug	14 Jul	22 Aug	15 Aug	1 Aug
CYMO	----	----	----	----	27 Jun	----	----	----	----	----
DEPI	----	Jul	----	----	----	----	----	----	----	----
ERAS	----	30 Jul	Jul	20 Jul	27 Jun	----	14 Jul	7 Aug	----	20 Jul
ERCE	----	----	----	----	----	----	----	----	----	----
ERBR	----	Aug	----	25 Sep	4 Nov	6 Nov	31 Aug	----	----	----
EROV	5 Aug	Jul	Jul	25 Aug	27 Jun	4 Aug	14 Jul	30 Aug	25 Aug	28 Jul
GIAG	----	15 Aug	----	15 Jul	----	----	----	----	----	----
GICO	----	----	----	----	27 Jun	----	6 Aug	30 Aug	25 Aug	29 Jul
GRSP	Jul	----	30 Jul	----	----	4 Aug	Jul	----	25 Aug	18 Jul
HAAC	----	Jul	Jul	1 Aug	27 Jun	----	Jul	23 Jul	----	15 Jul
LEPU	Jul	5 Aug	25 Jul	18 Aug	15 Aug	4 Aug	14 Jul	23 Aug	13 Jul	15 Jul
MACA	----	Aug	----	Oct	----	6 Nov	21 Sep	----	----	----
MAGR	----	----	----	----	----	----	6 Aug	20 Sep	----	----
OPPO	----	25 Jul	Aug	1 Sep	15 Aug	4 Aug	6 Aug	4 Sep	13 Sep	1 Sep
ORFA	----	30 Jun	----	5 Jul	4 Nov	----	----	----	----	----
ORHY	5 Aug	30 Jul	25 Jul	6 Aug	15 Jul	4 Aug	Jul	21 Aug	27 Jul	20 Jul
PECL	----	----	----	----	----	----	----	25 Aug	10 Aug	1 Aug
PELA	Aug	Aug	Aug	6 Aug	14 Aug	4 Aug	14 Jul	----	----	----
PHHO	Jun	20 Jun	25 Jun	20 Jul	27 Jun	17 Jul	24 Jul	14 Jul	15 Jun	15 Jul
POSE	Jul	Aug	Jul	18 Aug	9 Sep	17 Jul	14 Jul	22 Aug	13 Jul	13 Jul
SIHY	----	30 Jul	30 Jul	18 Aug	----	29 Aug	14 Jul	22 Aug	10 Aug	5 Aug
SILI	Jul	15 Jun	Jun	18 Aug	27 Jun	----	----	28 Jul	27 Jul	13 Jul
STCO	Aug	Jul	Jul	20 Aug	----	4 Aug	Jul	15 Aug	27 Jul	20 Jul
TECA	Aug	Aug	Aug	20 Sep	4 Nov	6 Nov	Aug	----	----	1 Sep
TOIN	----	----	----	----	----	----	----	16 Aug	----	4 Aug
VINU	----	----	----	----	----	15 Aug	----	26 Jul	----	20 Jul

TABLE VI. (Continued):

STUDY AREA SHOSHONI 7

	Growth Initiation									
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
AGSM	----	28 Mar	5 Apr	Apr	23 Apr	Apr	Apr	4 Apr	Apr	Apr
ALTE	----	----	May	Apr	Apr	Apr	Apr	Apr	Apr	Apr
ARHO[2]	----	----	----	----	----	----	Apr	----	Apr	Apr
ARTR	----	22 May	May	May	23 Apr	24 May	Apr	9 Apr	Apr	Apr
ASMI[2]	----	----	----	----	----	----	----	Apr	Apr	Apr
ASPU	----	5 Mar	Mar	----	----	May	Apr	Apr	Apr	Apr
BOGR	----	15 Apr	15 Apr	Apr	Mar	----	Apr	1 Apr	Apr	Apr
BRTE	----	5 Mar	Apr	May	----	----	Apr	11 Apr	Apr	Apr
CAFI	----	----	----	----	----	----	----	----	Apr	Apr
CELA	----	----	----	----	----	----	----	Apr	Apr	Apr
CHAL	----	----	----	----	----	----	May	----	----	May
CLLU	----	----	----	----	----	----	----	----	----	----
CYMO	----	----	----	----	Apr	----	Apr	Apr	Apr	Apr
DEGE	----	----	----	----	----	----	Apr	----	----	----
DEPI	----	----	----	May	Apr	----	May	10 Apr	Apr	Apr
ERPU	----	21 Feb	Mar	Apr	----	Apr	Apr	Apr	Apr	Apr
GIPU	----	----	----	----	----	----	----	----	----	----
LARE	----	----	----	----	----	----	----	Apr	Apr	Apr
LEDE	----	----	----	----	----	----	----	Apr	Apr	----
LUPU	----	----	----	May	----	May	----	Apr	Apr	Apr
MACA	----	----	----	----	May	----	----	----	----	Apr
OPPO	----	20 Apr	Apr	Apr	23 Apr	24 May	Apr	7 May	1 May	29 Apr
ORHY	----	5 Mar	5 Apr	Apr	Apr	Jun	----	9 Apr	Apr	Apr
PHHO	----	5 Mar	10 Apr	Apr	23 Apr	24 May	Apr	Apr	Apr	Apr
PLPA	----	5 Mar	Apr	----	17 May	24 May	May	May	----	Apr
POSE	----	21 Feb	30 May	Apr	Apr	----	Apr	Apr	Apr	Apr
SAIB	----	----	----	----	----	----	----	----	----	----
SIAL	----	----	----	----	----	24 May	----	----	----	----
SIHY	----	25 Mar	25 Mar	Apr	----	----	----	----	Apr	Apr
SILI	----	----	----	----	----	----	----	----	----	May
SPCO	----	25 Apr	Apr	Apr	17 May	Apr	Apr	Apr	Apr	Apr
STCO	----	5 Mar	Mar	Mar	23 Apr	24 May	Apr	10 Apr	Apr	Apr
VUOC	----	----	----	----	----	----	----	----	----	Apr

TABLE VI. (Continued):

STUDY AREA SHOSHONI 7

	Full Bloom									
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
AGSM	5 Jul	15 Jul	18 Jul	15 Jul	----	----	----	25 Jun	30 Jun	4 Jul
ALTE	Jun	Jun	15 Jun	May	----	----	23 May	30 May	3 Jun	1 Jun
ARHO[2]	----	----	----	----	----	----	May	11 May	20 May	28 May
ARTR	15 Sep	10 Oct	10 Oct	Sep	----	----	Sep	----	25 Sep	15 Oct
ASMI[2]	----	----	----	----	----	----	23 May	May	3 Jun	10 Jul
ASPU	Jun	5 Jun	20 May	----	----	9 Jun	May	7 May	20 May	----
BOGR	7 Aug	20 Jul	20 Jul	6 Jul	----	----	26 Jun	27 Jun	13 Jul	8 Aug
BRTE	----	10 Jun	30 Jun	10 Jun	8 Jun	----	----	8 Jun	20 May	27 Jun
CAFI	----	----	----	----	----	----	23 May	23 May	1 May	29 Jun
CELA	30 Jul	----	----	----	----	----	----	----	----	----
CHAL	----	----	----	----	----	----	26 Jun	5 Jul	----	----
CLLU	----	----	----	----	----	----	6 Jun	----	----	----
CYMO	----	----	30 May	----	17 May	----	May	23 May	1 May	----
DEGE	----	----	----	----	----	----	----	----	----	----
DEPI	----	----	----	May	May	----	----	7 Jun	20 May	20 Jun
ERPU	27 Jun	30 May	30 Jun	17 Jun	Jun	28 Jun	6 Jun	8 Jun	18 Jun	1 Jul
GIPU	----	----	----	----	----	----	----	1 Jun	----	----
LARE	----	----	----	----	----	----	23 May	5 Jun	25 May	3 Jul
LEDE	----	----	----	----	----	----	----	27 May	27 May	----
LUPU	----	25 Jun	15 Jun	----	----	----	6 Jun	11 Jun	23 Jun	----
MACA	----	25 Jun	----	----	8 Jun	----	26 Jun	21 Jun	18 Jun	7 Jul
OPPO	5 Jul	20 Jun	5 Jul	Jun	Jun	19 Jul	26 Jun	28 Jun	21 Jun	4 Jul
ORHY	Jun	10 Jun	30 Jun	Jun	Jun	----	----	11 Jun	6 Jun	3 Jul
PHHO	----	10 May	30 May	May	8 Jun	Jun	23 May	2 May	Apr	17 May
PLPA	1 Jul	5 Jun	25 Jun	----	Jun	Jun	6 Jun	16 Jun	3 Jun	26 Jun
POSE	Jun	10 Jun	10 Jun	15 Jun	----	Jun	6 Jun	6 Jun	3 Jun	25 Jun
SAIB	----	----	----	----	----	----	8 Aug	----	----	----
SIAL	----	----	----	----	----	28 Jun	----	----	----	----
SIHY	Jun	25 Jun	30 Jun	Jun	8 Jun	----	6 Jun	26 Jun	1 Jun	----
SILI	----	----	30 May	----	----	----	----	----	5 Jun	15 Jun
SPCO	5 Jul	20 Jun	30 Jun	----	----	----	26 Jun	----	4 Jul	----
STCO	Jun	5 Jul	5 Jul	Jul	----	----	26 Jun	19 Jun	29 May	1 Jul
VUOC	----	----	----	----	----	----	6 Jun	----	----	1 Jul

TABLE VI. (Continued):

STUDY AREA SHOSHONI 7

Seed Dissemination

Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
AGSM	Oct	30 Oct	30 Oct	1 Oct	----	19 Jul	8 Aug	----	27 Jul	25 Jul
ALTE	30 Jun	15 Jun	30 Jun	15 Jun	Jul	19 Jul	26 Jun	25 Jul	27 Jul	18 Jul
ARHO[2]	----	----	----	----	----	----	26 Jun	12 Jul	13 Jul	8 Aug
ARTR	9 Nov	9 Nov	1 Nov	Nov	19 Nov	23 Sep	----	----	----	----
ASMI[2]	----	----	----	----	----	----	17 Jul	8 Aug	27 Jul	15 Aug
ASPU	15 Jul	15 Jun	10 Jul	----	----	----	26 Jun	23 Jul	13 Jul	----
BOGR	9 Nov	10 Nov	Nov	Sep	----	9 Aug	8 Aug	26 Aug	24 Aug	5 Sep
BRTE	5 Jul	10 Jul	10 Jul	6 Jul	Jun	19 Jul	Jun	6 Aug	13 Jul	18 Jul
CAFI	----	----	----	----	----	----	----	30 Aug	3 Jun	28 Jul
CELA	Sep	----	----	----	----	----	----	----	----	----
CHAL	----	----	----	----	----	----	8 Aug	18 Aug	11 Sep	----
CLLU	----	----	----	----	----	----	26 Jun	----	----	----
CYMO	----	----	20 Jun	----	8 Jun	----	6 Jun	----	18 Jun	----
DEGE	----	----	----	----	----	----	----	----	----	----
DEPI	----	----	10 Jul	1 Jul	Jun	----	Jul	30 Aug	13 Jul	14 Jul
ERPU	15 Jul	15 Jun	20 Jul	25 Jul	Jun	19 Jul	17 Jul	27 Jul	27 Jul	5 Aug
GIPU	----	----	----	----	----	----	17 Jul	14 Jul	----	----
LARE	Jul	----	----	----	----	----	6 Jun	26 Jul	30 Jun	1 Aug
LEDE	5 Jul	----	20 Jul	----	----	----	23 May	21 Jul	30 Jun	18 Jul
LUPU	----	----	25 Jul	1 Jul	----	9 Aug	26 Jun	25 Jul	10 Aug	----
MACA	----	----	Jul	----	----	----	Jul	30 Jul	10 Aug	8 Aug
OPPO	15 Aug	----	Aug	Aug	Jun	----	8 Aug	11 Aug	11 Sep	19 Sep
ORHY	5 Aug	15 Jul	15 Jul	30 Jul	Jul	19 Jul	26 Jun	30 Jul	27 Jul	18 Jul
PHHO	25 Jun	5 Jul	5 Jul	10 Jul	Jul	----	6 Jun	16 Jul	3 Jun	13 Jul
PLPA	1 Aug	15 Jul	25 Jul	----	Jun	19 Jul	17 Jul	----	27 Aug	18 Jul
POSE	30 Jun	5 Jul	30 Jun	10 Aug	Jun	19 Jul	26 Jun	18 Aug	13 Jul	13 Jul
SAIB	----	----	----	----	----	----	29 Sep	----	----	----
SIAL	----	----	----	----	----	10 Jul	----	23 Jul	----	----
SIHY	5 Aug	15 Jul	5 Aug	10 Aug	Jun	9 Aug	17 Jul	30 Jul	10 Aug	28 Aug
SILI	----	----	5 Jul	----	----	----	----	----	----	1 Aug
SPCO	1 Aug	15 Jul	25 Jul	----	Jun	----	17 Jul	Aug	24 Aug	----
STCO	5 Aug	14 Jul	20 Jul	5 Aug	Jun	23 Sep	17 Jul	18 Aug	13 Jul	23 Jul
VUOC	----	----	----	----	----	----	26 Jun	----	13 Jul	10 Jul

TABLE VI. (Continued):

STUDY AREA SWEETWATER

Growth Initiation

Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
AGSM	----	28 Mar	Apr	Apr	15 Apr	Apr	May	15 Apr	Apr	Apr
ALTE	----	----	----	----	----	24 May	May	Apr	Apr	May
ARFR	----	28 Mar	5 Apr	Apr	15 Apr	24 May	May	Apr	Apr	Apr
ARHO	----	----	----	Apr	15 Apr	24 May	May	Apr	May	Apr
ARHO^2	----	20 Apr	----	Apr	15 Apr	Apr	----	Apr	Apr	Apr
ARNO	----	22 May	20 May	May	15 Apr	24 May	5 May	Apr	Apr	1 May
ARTR	----	22 May	20 May	May	15 Apr	24 May	5 May	10 Apr	Apr	Apr
ASMI	----	1 Jun	----	----	----	----	----	----	----	----
ASMI^2	----	----	----	----	15 Apr	Apr	Apr	Apr	Apr	Apr
ASPU	----	20 Mar	5 Apr	Apr	15 Apr	24 May	May	Apr	Apr	Apr
ASCI	----	----	----	----	----	----	----	----	----	----
ASSP	----	25 Mar	5 Apr	Apr	15 Apr	24 May	May	Apr	Apr	Apr
CAEL	----	----	----	----	15 Apr	Apr	Apr	Apr	Apr	Apr
CAFI	----	28 Mar	Apr	Apr	15 Apr	Apr	----	Apr	Apr	----
CANU	----	15 May	10 May	----	----	----	----	----	----	----
CACH	----	----	----	----	----	Apr	----	----	----	----
CELA	----	----	----	----	----	----	----	----	May	Apr
CHDO	----	1 Jun	----	----	----	Apr	May	Apr	Apr	Apr
CHNA	----	25 Apr	30 Apr	May	15 Apr	24 May	May	Apr	Apr	Apr
CHVI	May	20 Apr	May	May	18 May	24 May	Apr	18 Apr	Apr	Apr
COPA	----	----	----	Apr	Apr	Apr	Apr	----	Apr	May
CRBR	----	25 Mar	1 Mar	Apr	15 Apr	Apr	May	----	Apr	May
CRFL	----	----	----	----	15 Apr	Apr	May	Apr	Apr	May
CYMO	----	----	May	Apr	Mar	Apr	May	----	Apr	Apr
DEGE	-----	25 Mar	5 Apr	Apr	18 May	----	May	----	Apr	----
ERCE	----	----	----	----	----	----	----	May	25 May	May
ERLA	----	----	May	----	----	----	----	----	----	----
EROV	----	20 Apr	May	May	Apr	24 May	----	Apr	Apr	Apr
ERPU	----	25 Mar	5 Apr	----	----	----	----	----	----	Apr
HAAC	----	----	----	----	----	----	----	Apr	Apr	Apr
KOCR	----	28 Mar	Apr	Apr	15 Apr	Apr	Apr	Apr	Apr	Apr
LARE	----	----	----	----	----	----	----	May	----	Apr
LELU	----	----	----	----	----	----	----	----	Apr	May
LEPU	----	20 May	May	Apr	15 Apr	Apr	Apr	18 Apr	Apr	Apr
LIRU	----	----	----	----	----	----	----	----	----	Apr
MACA	----	----	----	----	----	----	----	Apr	Apr	Apr
MAGR	----	----	----	May	May	----	----	May	May	Apr
OECA	----	----	----	----	----	----	----	----	----	----
OEAL	----	----	----	----	----	----	----	----	Apr	----
OPPO	----	25 Apr	May	Apr	15 Apr	24 May	May	6 May	Apr	1 May
ORFA	----	----	----	----	----	----	----	----	----	----
ORHY	----	28 Mar	Apr	Mar	15 Apr	24 May	May	19 Apr	Apr	Apr
OXLA	----	20 Mar	30 Mar	----	----	----	----	----	Apr	----
PECL	----	May	----	Apr	----	----	----	----	----	----
PEFR	----	----	----	----	15 Apr	Apr	May	Apr	Apr	Apr
PHHO	----	----	----	Apr	15 Apr	24 May	May	Apr	Apr	Apr
POSE	----	25 Mar	Apr	----	----	----	Apr	Apr	Apr	Apr
PSTE	----	20 May	----	May	18 May	Jun	May	May	Apr	Apr

TABLE VI. (Continued):

STUDY AREA SWEETWATER

Growth Initiation

Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
SADE	----	----	----	----	----	7 Jun	----	----	----	----
SPCO	----	28 Mar	5 Apr	Apr	18 May	Apr	May	Apr	May	Apr
STCO	----	28 Mar	Apr	Mar	15 Apr	Apr	Apr	Apr	Apr	Apr
TECA	----	28 Mar	5 Apr	Apr	18 May	24 May	Apr	Apr	Apr	Apr
TOIN	----	----	May	Apr	Mar	----	----	Apr	Apr	Apr
VINU	----	5 May	----	----	Apr	24 May	Apr	----	Apr	Apr
ZYVE	----	28 Mar	5 Apr	Apr	15 Apr	Apr	Apr	Apr	Apr	Apr

TABLE VI. (Continued):

STUDY AREA SWEETWATER

	Full Bloom									
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
AGSM	12 Jul	10 Jul	5 Jul	----	----	----	----	2 Jul	----	----
ALTE	----	----	15 Jun	----	----	----	6 Jun	8 Jun	17 Jun	18 Jun
ARFR	5 Sep	Aug	Aug	25 Aug	----	22 Sep	2 Sep	25 Aug	12 Sep	----
ARHO	----	20 Jun	20 Jun	5 Jul	Jun	Jun	6 Jun	18 Jun	25 May	1 Jul
ARHO[2]	----	25 May	30 May	25 May	----	----	23 May	May	17 Jun	10 Jun
ARNO	15 Sep	20 Sep	20 Sep	15 Sep	----	22 Sep	2 Sep	7 Sep	4 Oct	----
ARTR	15 Sep	15 Sep	20 Sep	19 Sep	----	22 Sep	2 Sep	6 Sep	4 Oct	----
ASMI	----	20 Jul	Jul	----	----	----	----	----	----	----
ASMI[2]	----	----	----	----	----	----	26 Jun	15 Jun	9 Jun	30 Jun
ASPU	1 Jul	5 Jun	15 Jun	2 Jun	----	----	----	12 May	9 Jun	12 Jun
ASCI	----	----	----	----	----	----	----	15 Jun	----	----
ASSP	1 Jul	19 Jun	30 Jun	15 Jun	Jun	Jun	6 Jun	19 Jun	9 Jun	10 Jun
CAEL	----	----	----	----	----	----	Jun	18 May	9 Jun	4 Jun
CAFI	----	30 May	15 Jun	12 Jun	12 Jun	----	23 May	18 May	25 Jun	----
CANU	20 Jun	19 Jun	Jun	----	----	----	----	----	----	----
CACH	----	----	----	----	----	----	----	----	----	----
CELA	----	----	----	----	----	1 Sep	----	----	12 Sep	----
CHDO	----	20 Jun	20 Jun	----	----	----	26 Jun	19 Jun	13 Jul	4 Jul
CHNA	Sep	Sep	Sep	19 Sep	Aug	19 Jul	2 Sep	7 Sep	12 Sep	27 Aug
CHVI	10 Sep	10 Aug	Aug	15 Sep	Aug	22 Sep	2 Sep	17 Aug	29 Jul	1 Aug
COPA	29 Jun	5 Jun	20 Jun	10 Jun	8 Jun	7 Jun	6 Jun	18 Jun	9 Jun	28 Jun
CRBR	29 Jun	22 May	30 Jun	1 Jul	8 Jun	7 Jun	23 May	5 Jun	17 Jun	28 Jun
CRFL	----	----	----	----	Jun	30 Jun	6 Jun	3 Jun	1 Jul	1 Jul
CYMO	----	----	5 Jun	17 May	----	----	23 May	May	May	----
DEGE	20 Jun	25 Jun	15 Jun	May	8 Jun	----	----	23 Jun	17 Jun	2 Jul
ERCE	----	----	----	----	----	----	16 Jul	16 Jul	29 Jul	----
ERLA	----	----	15 Jun	----	----	----	----	----	----	----
EROV	20 Jun	25 May	15 Jun	15 Jun	Jun	7 Jun	23 May	10 Jun	17 Jun	28 Jun
ERPU	29 Jun	15 Jun	Jun	----	----	----	6 Jun	17 Jun	17 Jun	20 Jun
HAAC	----	----	----	----	----	----	----	12 Jun	25 May	10 Jun
KOCR	25 Jun	20 Jun	20 Jun	20 Jun	----	30 Jun	6 Jun	18 Jun	17 Jun	1 Jul
LARE	----	----	----	----	----	----	23 Jun	4 Jun	----	----
LELU	----	1 Jun	24 Jun	----	----	30 Jun	6 Jun	----	25 May	28 Jun
LEPU	30 Jun	19 Jun	30 Jun	5 Jul	29 Jun	----	26 Jun	21 Jun	17 Jun	26 Jun
LIRU	----	----	----	----	----	----	----	22 Jun	----	23 Jun
MACA	----	----	----	----	----	----	8 Aug	3 Aug	12 Aug	8 Aug
MAGR	----	----	Jul	20 Aug	----	----	26 Jun	20 Jun	15 Jul	----
OECA	----	----	20 Jun	----	----	----	----	----	9 Jun	----
OEAL	----	----	----	----	----	----	6 Jun	Jun	17 Jun	----
OPPO	15 Jul	5 Jul	10 Jul	30 Jul	29 Jun	----	26 Jun	6 Jul	1 Jul	25 Jul
ORFA	----	20 Jun	Jul	----	----	----	----	25 Jun	1 Jul	----
ORHY	20 Jun	20 Jun	30 Jun	Jun	----	Jun	26 Jun	19 Jun	1 Jul	2 Jul
OXLA	----	10 Jun	25 Jun	----	----	----	----	----	1 Jul	28 Jun
PECL	30 Jun	20 Jun	25 Jun	Jun	----	----	----	----	----	----
PEFR	----	----	----	----	Jun	Jun	6 Jun	17 Jun	9 Jun	14 Jun
PHHO	30 Jun	22 May	30 May	May	Jun	----	23 May	19 May	25 May	2 Jun
POSE	15 Jun	20 Jun	----	----	----	----	6 Jun	17 Jun	17 Jun	20 Jun
PSTE	----	----	----	Jul	----	----	26 Jun	18 Jun	29 Jul	28 Jun

TABLE VI. (Continued):

STUDY AREA SWEETWATER

	Full Bloom									
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
SADE	----	----	----	----	----	----	----	----	----	----
SPCO	----	25 Jun	30 Jun	Jul	----	----	----	23 Jun	----	29 Jun
STCO	25 Jun	25 Jun	30 Jun	25 Jun	----	7 Aug	26 Jun	24 Jun	1 Jul	2 Jul
TECA	1 Aug	1 Aug	1 Aug	5 Aug	19 Jul	7 Aug	16 Jul	22 Jul	12 Aug	3 Aug
TOIN	----	10 Jun	15 Jun	10 Sep	----	----	----	Jun	9 Jun	----
VINU	----	25 May	1 Jun	----	8 Jun	----	----	19 May	21 May	10 Jun
ZYVE	----	30 May	5 Jun	May	----	----	23 May	30 May	25 May	16 Jun

TABLE VI. (Continued):

STUDY AREA SWEETWATER

Seed Dissemination

Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
AGSM	15 Sep	15 Sep	30 Jul	----	----	----	8 Aug	23 Aug	12 Aug	----
ALTE	----	----	25 Jul	----	----	19 Jul	26 Jun	16 Jul	15 Jul	25 Jul
ARFR	Nov	Oct	Oct	Oct	----	----	----	----	----	----
ARHO	----	25 Jul	----	1 Aug	19 Jul	19 Jul	16 Jul	24 Jul	15 Jul	25 Jul
ARHO^2	----	30 Jun	----	25 Jun	8 Jun	19 Jul	Jul	9 Jul	15 Jul	27 Jul
ARNO	5 Nov	25 Oct	25 Oct	Nov	----	----	----	----	----	----
ARTR	10 Nov	30 Oct	25 Oct	Nov	----	----	----	----	----	----
ASMI	----	Aug	Aug	----	----	----	----	----	----	----
ASMI^2	----	----	----	----	----	19 Jul	16 Jul	15 Jul	15 Jul	25 Jul
ASPU	12 Jul	10 Jun	Jun	15 Jul	29 Jun	----	26 Jun	Jul	29 Jul	28 Jul
ASCI	----	----	----	----	----	----	----	30 Jul	----	----
ASSP	Aug	25 Jul	25 Jul	25 Aug	19 Jul	1 Sep	26 Jun	19 Aug	29 Jul	22 Jul
CAEL	----	----	----	----	8 Jun	7 Aug	26 Jun	30 Jul	1 Jul	8 Aug
CAFI	20 Aug	5 Aug	5 Jul	19 Sep	8 Jun	----	26 Jun	30 Jul	15 Jul	----
CANU	5 Jul	5 Jul	----	----	----	----	----	----	----	----
CACH	----	----	----	----	----	19 Jul	----	----	----	----
CELA	----	----	----	----	----	----	----	----	----	----
CHDO	----	10 Jul	25 Jul	----	----	7 Aug	----	25 Jul	24 Jul	8 Aug
CHNA	Oct	Oct	Oct	Nov	----	----	----	----	----	----
CHVI	30 Oct	----	Oct	Nov	----	----	27 Sep	----	4 Oct	----
COPA	Jul	20 Jul	20 Jul	10 Aug	19 Jul	19 Jul	----	24 Jul	29 Jul	8 Aug
CRBR	10 Aug	Aug	25 Jul	20 Aug	29 Jun	19 Jul	26 Jun	30 Jul	15 Jul	----
CRFL	----	----	----	----	19 Jul	7 Aug	Jul	3 Jul	15 Jul	1 Aug
CYMO	----	----	20 Jun	15 Jun	8 Jun	19 Jul	6 Jun	29 Jun	9 Jun	----
DEGE	12 Jul	30 Jun	15 Jul	20 Jul	29 Jun	----	26 Jun	21 Jul	29 Jul	12 Jul
ERCE	----	----	----	----	----	----	2 Sep	26 Sep	12 Sep	----
ERLA	----	----	----	----	----	----	----	----	----	----
EROV	5 Jul	10 Jul	10 Jul	Aug	29 Jun	19 Jul	16 Jul	24 Jul	29 Jul	8 Aug
ERPU	5 Jul	5 Jul	10 Jul	----	----	----	----	27 Jul	29 Jul	15 Jul
HAAC	----	----	----	----	----	----	26 Jun	1 Jul	1 Jul	25 Jul
KOCR	24 Aug	15 Jul	15 Jul	10 Aug	29 Jun	19 Jul	16 Jul	30 Jul	15 Jul	27 Jul
LARE	----	----	----	----	----	----	----	13 Jul	----	----
LELU	----	29 Jul	25 Jul	----	----	19 Jul	16 Jul	14 Aug	29 Jul	1 Aug
LEPU	Jul	1 Aug	20 Jul	10 Aug	19 Jul	7 Aug	16 Jul	27 Jul	15 Jul	6 Aug
LIRU	----	----	----	----	----	----	----	----	12 Aug	6 Aug
MACA	----	----	----	----	----	----	----	----	----	----
MAGR	----	----	Aug	Sep	19 Jul	7 Aug	8 Aug	29 Jul	----	----
OECA	----	----	Jul	----	----	----	----	----	1 Jul	----
OEAL	----	----	----	----	----	----	----	----	29 Jul	----
OPPO	Sep	Aug	----	Sep	18 Sep	1 Sep	8 Aug	8 Sep	12 Sep	10 Sep
ORFA	----	15 Jul	----	----	----	----	8 Aug	28 Jul	12 Aug	----
ORHY	5 Sep	10 Jul	10 Jul	15 Jul	19 Jul	19 Jul	Jul	15 Jul	15 Jul	25 Jul
OXLA	Aug	Aug	25 Jul	----	----	----	----	----	24 Aug	7 Aug
PECL	20 Jul	10 Jul	5 Aug	30 Jul	----	----	----	----	----	----
PEFR	----	----	----	----	29 Jun	7 Aug	16 Jul	21 Aug	15 Jul	7 Aug
PHHO	12 Jul	5 Jul	Jul	2 Jun	29 Jun	1 Sep	6 Jun	2 Jul	1 Jul	10 Jul
POSE	5 Jul	5 Jul	----	----	----	1 Sep	Jul	10 Jul	15 Jul	25 Jul
PSTE	----	Aug	----	Aug	----	1 Sep	16 Jul	30 Aug	----	5 Aug

TABLE VI. (Continued):

STUDY AREA SWEETWATER

Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
	Seed Dissemination									
SADE	----	----	----	----	----	----	----	----	----	----
SPCO	Aug	5 Jul	----	Aug	----	----	16 Jul	24 Jul	15 Jul	8 Aug
STCO	5 Sep	10 Jul	10 Jul	1 Aug	19 Jul	19 Jul	16 Jul	15 Jul	15 Jul	28 Jul
TECA	Oct	15 Oct	15 Oct	19 Sep	----	----	2 Sep	16 Sep	12 Sep	10 Sep
TOIN	----	10 Jul	Aug	Oct	----	----	----	----	----	----
VINU	----	10 Jul	Aug	Oct	29 Jun	----	26 Jun	----	9 Jun	25 Jul
ZYVE	----	5 Jul	30 Jun	25 Jun	29 Jun	----	6 Jun	12 Jul	1 Jul	23 Jul

TABLE VI. (Continued):

STUDY AREA UPPER GOVERNMENT

	Growth Initiation									
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
AGSM	----	Mar	Mar	Apr	Mar	Apr	Apr	Apr	Apr	Apr
ALTE	----	----	----	Apr	Mar	24 May	Apr	Apr	Apr	Apr
ANDI	----	----	----	---	Apr	24 May	May	Apr	Apr	Apr
ARHO[2]	----	----	----	----	----	----	May	Apr	Apr	Apr
ARLI	----	----	May	May	Apr	24 May	----	----	----	----
ARTR	----	May	May	May	23 Apr	24 May	May	18 Apr	Apr	Apr
ASDR	----	----	----	----	----	----	----	----	----	----
ASPU	----	----	May	Apr	23 Apr	May	May	Apr	Apr	Apr
BOGR	----	----	----	----	----	Apr	May	Apr	Apr	Apr
BRTE	----	----	Jun	Apr	----	----	----	----	----	Apr
CANU	----	----	----	----	----	----	----	----	Apr	Apr
CACH	----	----	----	May	23 Apr	Apr	May	Apr	Apr	Apr
CELA	----	----	May	----	----	----	----	----	----	----
CHVI	----	May	May	May	23 Apr	Apr	May	Apr	Apr	Apr
CRMO	----	----	----	Apr	23 Apr	Apr	May	Apr	Apr	Apr
CYMO	----	----	May	Apr	23 Apr	----	----	Apr	Apr	Apr
DEPI	----	----	May	May	----	24 May	May	May	May	Apr
ERPU	----	----	Jun	May	23 Apr	24 May	----	Apr	Apr	Apr
HAAC	----	----	----	----	----	----	----	Apr	Apr	Apr
KOCR	----	Mar	Mar	Apr	----	Apr	May	Apr	Apr	Apr
LARE	----	----	Jun	Apr	----	24 May	----	----	May	Apr
LEDE	----	----	Jun	----	----	----	----	----	----	----
LEAL	----	----	----	----	----	----	----	Apr	----	----
LERE	----	----	Jun	----	23 Apr	24 May	----	Apr	Apr	Apr
LOFO	----	----	----	----	----	----	----	Apr	----	Apr
MACA	----	----	----	----	Apr	----	----	Apr	Apr	Apr
MAGL	----	----	May	----	----	----	----	----	----	----
OPPO	----	May	May	May	23 Apr	24 May	5 May	13 May	1 May	29 Apr
PECL	----	----	Jun	May	May	24 May	May	Apr	Apr	Apr
PHHO	----	----	Apr	Apr	23 Apr	24 May	----	Apr	Apr	Apr
PLPA	----	----	Jun	----	----	----	----	----	----	Apr
POSE	----	Mar	Mar	Apr	Mar	Apr	May	Apr	Apr	Apr
SIHY	----	Mar	----	----	----	----	----	----	----	----
SPCO	----	May	May	Apr	23 Apr	24 May	May	26 Apr	Apr	Apr
STCO	----	----	----	----	23 Apr	Apr	May	Apr	Apr	Apr
TRDU	----	----	----	----	Apr	----	----	13 May	Apr	Apr
VIAM	----	----	Jun	May	Apr	Apr	May	Apr	Apr	Apr
VINU	----	----	May	May	23 Apr	24 May	May	----	Apr	Apr
XASA	----	----	----	----	----	----	May	Apr	Apr	Apr

TABLE VI. (Continued):

STUDY AREA UPPER GOVERNMENT										
	Full Bloom									
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
AGSM	10 Jul	Jul	10 Jul	Jul	----	----	26 Jun	----	30 Jun	----
ALTE	Jun	Jun	20 Jun	10 Jun	----	----	6 Jun	5 Jun	9 Jun	13 Jun
ANDI	----	----	----	----	----	----	6 Jun	6 Jun	9 Jun	----
ARHO[2]	----	----	----	----	----	----	23 May	15 May	9 Jun	15 Jun
ARLI	----	----	30 May	5 Jun	----	----	----	----	----	----
ARTR	Aug	22 Aug	Aug	18 Sep	Sep	----	Sep	5 Sep	----	----
ASDR	----	----	----	----	----	----	----	13 Jun	----	----
ASPU	----	----	May	1 Jun	17 May	----	23 May	25 May	----	20 Jun
BOGR	----	----	----	----	----	----	16 Jul	----	25 May	30 Jul
BRTE	----	----	30 Jun	Jun	----	----	----	25 Jun	----	28 Jun
CANU	----	----	----	----	----	----	26 Jun	29 Jun	17 Jun	1 Jul
CACH	5 Jul	10 Jun	5 Jun	20 Jun	8 Jun	Jun	Jun	9 Jun	17 Jun	13 Jun
CELA	10 Jul	----	----	----	----	----	----	----	9 Jun	----
CHVI	15 Aug	22 Aug	Aug	20 Sep	10 Aug	Jun	1 Sep	21 Aug	----	15 Aug
CRMO	----	10 Jun	10 Jun	10 Jun	8 Jun	Jun	6 Jun	4 Jun	17 Jun	15 Jun
CYMO	----	----	Jun	May	18 May	----	5 May	May	25 May	----
DEPI	----	----	15 Jun	Jun	----	----	6 Jun	----	----	10 Jun
ERPU	----	----	25 Jun	15 Jul	Jun	19 Jul	6 Jun	4 Jul	17 Jun	30 Jun
HAAC	----	----	----	----	----	----	----	24 May	9 Jun	----
KOCR	Jul	20 Jun	30 Jun	30 Jun	8 Jun	26 Jun	6 Jun	12 Jun	17 Jun	30 Jun
LARE	----	----	24 Jun	15 Jun	----	----	6 Jun	23 Jun	25 May	28 Jun
LEDE	----	----	Jun	----	----	----	----	----	----	----
LEAL	----	----	----	----	----	----	----	----	----	----
LERE	----	----	25 Jun	----	Jun	----	26 Jun	25 Jun	17 Jun	1 Jul
LOFO	----	----	----	----	----	----	23 May	9 May	25 May	5 Jun
MACA	----	----	----	----	28 Jun	26 Jun	26 Jun	26 Jun	30 Jun	11 Jul
MAGL	----	----	30 Jun	----	----	----	----	----	----	----
OPPO	5 Jul	Jul	Jul	25 Jun	28 Jun	19 Jul	26 Jun	23 Jun	30 Jun	15 Jul
PECL	----	20 Jun	24 Jun	Jun	----	----	6 Jun	13 Jun	17 Jun	----
PHHO	Jun	5 Jun	1 Jun	May	10 May	Jun	23 May	11 May	25 May	24 May
PLPA	----	----	Jul	----	----	Jun	Jun	----	30 Jun	4 Jul
POSE	----	10 Jun	30 Jun	20 Jun	8 Jun	----	6 Jun	----	17 Jun	----
SIHY	----	Jul	----	----	----	----	----	----	----	----
SPCO	30 Jun	15 Jun	Jun	Jun	----	----	26 Jun	26 Jun	13 Jul	----
STCO	----	----	----	----	----	----	Jun	2 Jul	17 Jun	4 Jul
TRDU	----	----	----	----	----	----	26 Jun	13 Jun	17 Jun	18 Jun
VIAM	----	----	25 Jun	----	----	Jun	Jun	4 Jun	9 Jun	13 Jun
VINU	----	----	Jun	May	May	----	23 May	20 May	25 May	----
XASA	----	----	----	----	----	----	1 Sep	21 Aug	11 Sep	----

TABLE VI. (Continued):

STUDY AREA UPPER GOVERNMENT

	Seed Dissemination									
Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
AGSM	Aug	25 Aug	Aug	Aug	10 Aug	9 Aug	8 Aug	30 Aug	24 Aug	----
ALTE	Jun	1 Jun	Jul	24 Jul	28 Jun	9 Aug	16 Jul	6 Aug	31 Jul	20 Jul
ANDI	----	----	----	----	8 Jun	----	26 Jun	27 Jul	----	----
ARHO[2]	----	----	----	----	----	----	26 Jun	14 Jul	----	10 Aug
ARLI	----	----	Jun	10 Jul	8 Jun	19 Jul	----	11 Aug	----	----
ARTR	Nov	Nov	Nov	Nov	----	23 Sep	----	----	----	----
ASDR	----	----	----	----	----	----	8 Aug	14 Aug	----	----
ASPU	----	----	Jun	5 Jul	28 Jun	9 Aug	16 Jul	27 Jul	30 Jun	10 Aug
BOGR	----	----	----	----	----	----	----	----	13 Jul	10 Sep
BRTE	----	----	25 Jul	25 Jul	19 Jul	19 Jul	16 Jul	12 Aug	10 Aug	25 Jul
CANU	----	----	----	----	----	----	16 Jul	29 Jul	31 Jul	1 Aug
CACH	25 Jul	Jul	25 Jul	25 Jul	18 Jun	19 Jul	16 Jul	14 Aug	----	3 Aug
CELA	Aug	----	----	----	----	----	----	----	----	----
CHVI	----	Sep	Sep	Oct	----	19 Jul	----	----	----	----
CRMO	20 Jul	15 Jun	20 Jul	5 Jul	28 Jun	19 Jul	16 Jul	1 Aug	30 Jun	16 Jul
CYMO	----	----	24 Jun	5 Jun	8 Jun	----	26 Jun	Jul	17 Jun	----
DEPI	----	----	20 Jul	5 Aug	----	----	16 Jul	----	30 Jun	27 Jul
ERPU	Jul	19 Jul	25 Jul	5 Aug	19 Jul	9 Aug	16 Jul	30 Aug	13 Jul	20 Jul
HAAC	----	----	----	----	----	----	26 Jun	30 Jul	13 Jul	----
KOCR	25 Jul	Jul	30 Jul	10 Aug	19 Jul	19 Jul	16 Jul	19 Aug	13 Jul	20 Jul
LARE	----	----	Jul	10 Aug	----	----	26 Jun	15 Jul	30 Jun	4 Aug
LEDE	----	----	1 Aug	----	----	----	----	----	----	----
LEAL	----	----	----	----	----	----	Jul	----	----	----
LERE	----	----	Jul	----	19 Jul	----	16 Jul	16 Jul	30 Jun	18 Jul
LOFO	----	----	Jun	----	----	----	----	26 Jul	30 Jun	10 Jul
MACA	----	----	----	----	10 Aug	9 Aug	16 Jun	23 Aug	10 Aug	6 Aug
MAGL	----	----	25 Jul	----	----	----	----	----	----	----
OPPO	30 Aug	Aug	Aug	Aug	10 Aug	23 Sep	8 Aug	3 Sep	24 Aug	10 Sep
PECL	----	Jul	Aug	1 Jul	10 Aug	----	Jul	8 Aug	13 Jul	----
PHHO	Jul	Jul	Jul	1 Jul	8 Jun	19 Jul	26 Jun	26 Jul	30 Jun	15 Jul
PLPA	----	----	30 Jul	----	----	19 Jul	Aug	----	31 Jul	20 Jul
POSE	Jul	Jul	Jul	10 Aug	28 Jun	19 Jul	16 Jul	14 Aug	13 Jul	----
SIHY	25 Jul	20 Aug	----	----	----	----	----	----	----	----
SPCO	Aug	20 Aug	5 Aug	15 Aug	10 Aug	1 Sep	16 Jul	11 Aug	31 Jul	----
STCO	----	----	----	----	19 Jul	19 Jul	Jul	30 Aug	31 Jul	25 Jul
TRDU	----	----	----	----	28 Jun	19 Jul	Jul	2 Jul	10 Aug	23 Jul
VIAM	Jul	Jul	Jul	----	28 Jun	9 Aug	26 Jun	9 Aug	13 Jul	23 Jul
VINU	----	----	Jul	Jun	28 Jun	----	Jun	29 Jun	17 Jun	----
XASA	----	----	----	----	----	----	29 Sep	----	----	----

S E C T I O N I I

Multiple Linear Regression for Predictive Modeling

1982

Introduction

A multiple linear regression model was used to analyze vegetative and reproductive phenology data. The purpose of the analysis was to first identify causal relationships between environmental factors and phenodynamics and secondly, to predict phenological development from environmental interactions. Two grass species, Agropyron smithii and A. spicatum, and two shrub species, Artemisia nova and A. tridentata, were analyzed.

Multiple linear regression has been utilized for comparison of environmental relationships to phenodynamics. The initial program utilized step-wise multiple regression with a forward selection process. That model was changed to a backward selection process of the Hocking-Lamotte-Leslie method of multiple regression analysis and was used through 1980. The procedured used for the present report is based upon an all possible subsets model of multiple regression. The criterion for selection of the "best" model is based upon Mallow's Cp. With this procedure, the total squared error contains a bias component and a random error component. When Cp values are plotted against p (where p is the expected value of Cp) the regressions with little bias will tend to fall near the line Cp=p. The smallest value of Cp is used to search for the "best" set of independent variables.

Fourteen independent variables were analyzed to develop the regression equations (Table 1). The regression model is expressed in terms of independent variables and their effect on a dependent or response variable.

TABLE I. Independent and dependent variables used in multiple regression analysis.

Variable No.	
X_1	Soil temperature at 38 cm depth on the sampling date (°C) (15")
X_2	Soil moisture % at 0-15 cm depth on the sampling date (0-6")
X_3	Soil moisture % at 15-30 cm depth on the sampling date (6-12")
X_4	Soil moisture % at 46-61 cm depth on the sampling date (18-24")
X_5	Soil moisture % at 0-15 cm depth on the previous sampling date
X_6	Soil moisture % at 15-30 cm depth on the previous sampling date
X_7	Soil moisture % at 46-61 cm depth on the previous sampling date
X_8	Oct. 15-April 15 precipitation accumulation (mm)
X_9	April 15-July 1 precipitation accumulation (mm)
X_{10}	July 1-Sept. 1 precipitation accumulation (mm)
X_{11}	Sept. 1-Oct. 15 precipitation accumulation (mm)
X_{12}	Ambient air temperature on sampling date (°C)
X_{13}	Maximum air temperature since the previous sampling date (°C)
X_{14}	Minimum air temperature since the previous sampling date (°C)
Y_{15}	Reproductive phenophase value
Y_{16}	Vegetative phenophase value

Metric-English equivalency values

1 mm = .04"

15 cm = 6"

30 cm = 12"

38 cm = 15"

46 cm = 18"

61 cm = 24"

(1.8)(°C) + 32 = °F

The model takes the form:

$$Y = B_0 + B_1X_{i1} + B_2X_{i2} + B_3X_{i3} + \dots B_nX_{in} + e_i$$

The Y is the response variable that is defined by the right side of the equation. In this report the response variables are the vegetative and reproductive phenological stages. The B_0 is the Y-axis intercept on the regression and is of little interpretive value in an ecological sense. The $B_1B_2\dots B_n$ coefficients result from the regression analysis. $X_1X_2\dots X_n$ represent the independent variables in the model. E_i is the random error component.

A simple T-test is calculated to determine the significance of the variables in each partial model. An analysis of variance is then conducted and the model is tested for significance. The variable selection process is terminated when addition of variables to the model results in no sighificant improvement of the model ($P \leq .05$).

An estimate of the Y response variable can be obtained from the regression equation. The adjusted multiple correlation coefficient and the standard error of the regression will determine the accuracy of the estimate. An evaluation of the t-value for regression coefficients, the F-value for the regression, and the multiple regression coefficient will yield the optimum predictive model for each data set. These models are necessary to forecast future phenological development rates and, of great importance, to supply quantitative data of interactive relationships.

The regression coefficients ($B_1B_2\dots B_n$) demonstrate the positive or negative dependence and the magnitude of that relationship to Y according to the influence of the other independent variables. A positive coefficient denotes a variable that promotes rate of plant development. Conversely, negative coefficients indicate variables which protract the plant development time.

Accelerated plant development rates are expressed by environmental conditions such as rapidly increasing and sustained high summer temperatures, limited precipitation, and rapid soil moisture depletion; a condition common to soils with high sand content and low waterholding capacity. Prolonged phenological development is exhibited as a response to cool summer temperatures, abundant precipitation, and long lasting soil moisture associated with abundant precipitation and high waterholding capacity of soils.

Greatest production of herbage is usually, but not always, associated with environmental factors identified by negative coefficients that prolong or delay phenological development. Extremes such as excessively cool and moist spring periods or an exceptionally early warm and dry spring can inhibit or modify plant or phenological development rates to such a degree that subsequent herbage production may be restricted as a result. The complexity of biological interactive responses to time and changing environmental stresses requires comprehensive data accumulation and analysis, as well as subjective judgement for definition of predictive models to accurately forecast future events.

The analyses for vegetative and reproductive phenodynamics for each of the four species are listed in following sections.

ANALYSES FOR AGROPYRON SMITHII

Reproductive Phenology. Eight independent environmental variables were chosen from the selection pool of fourteen variables. The variables chosen and their significance levels are listed in Table II. The regression model calculated for this subset of variables is:

$$Y_{15} = 18.340 - .271X_4 - .392X_7 + 2.953X_8 - 2.600X_9 - 6.410X_{10} + 2.909X_{11} - .173X_{12} + .365X_{14}$$

where Y_{15} = reproductive phenology.

This regression model was highly significant when tested by analysis of variance procedures ($P < .001$). The standard error of the regression was 1.400. The independent variables accounted for 74.79 percent of the variability of the reproductive phenology. This value is an adjusted multiple correlation coefficient for the number of variables present in the model. The majority of reproductive phenological scores for western wheatgrass were obtained from the overall phenology observations. This was due to the lack of reproductive culms encountered along the phenology transects. By addition of the overall phenology values the sample size for reproductive phenology was increased sufficiently to achieve an adequate level resulting in significant correlations of reproductive phenology with some of the environmental variables.

The variables which promoted phenological development were: Winter precipitation (X_8), Fall precipitation (X_{11}), and Minimum air temperature since the previous sampling date (X_{14}). Reproductive development was prolonged by: Soil moisture percent at 46-61 cm depth on the sampling date (X_4), Soil moisture percent at 46-61 cm depth on the previous sampling date (X_7), Spring precipitation (X_9), Summer precipitation (X_{10}), and ambient air temperature on the sampling date (X_{12}).

TABLE II. Description and significances of independent variables used in the analysis of reproductive phenology of *Agropyron smithii*.

X-Variable	Description	T-value	Significance
4	soil moisture % at 46-61 cm depth on the sampling date	-1.42	.182
7	soil moisture % at 46-61 cm depth on the previous sampling date	-3.74	.003
8	Oct. 15-April 15 precipitation accumulation (mm)	4.86	.000
9	April 15-July 1 precipitation accumulation (mm)	-3.00	.011
10	July 1-Sept. 1 precipitation accumulation (mm)	-4.08	.002
11	Sept. 1-Oct. 15 precipitation accumulation (mm)	2.08	.059
12	ambient air temperature on sampling date (°C)	-2.25	.044
14	minimum air temperature since the previous sampling date (°C)	3.58	.004

Vegetative Phenology. Eight independent environmental variables were selected from the total fourteen possible to supply the best regression model. The variables chosen and their significance levels are listed in Table III. The regression model calculated is listed below:

$$Y_{16} = 4.065 - .035X_2 + .203X_3 - .118X_4 + .111X_6 - .084X_7 + .169X_8 - .217X_9 + .145X_{14}$$

where Y_{16} = vegetative phenology.

The regression model was highly significant when tested by analysis of variance procedures ($P < .001$). The standard error of the regression was .862. The independent variables present in the model accounted for 59.83 percent of the vegetative phenology variability.

TABLE III. Description and significances of independent variables used in the analysis of vegetative phenology of *Agropyron smithii*.

X-Variable	Description	T-value	Significance
2	Soil moisture % at 0-15 cm depth on the sampling date	-1.18	.243
3	Soil moisture % at 15-30 cm depth on the sampling date	3.59	.001
4	Soil moisture % at 46-61 cm depth on the sampling date	-2.27	.028
6	Soil moisture % at 15-30 cm depth on the previous sampling date	2.25	.029
7	Soil moisture % at 46-61 cm depth on the previous sampling date	-2.19	-1.74
8	October 15 - April 15 precipitation accumulation (cm)	2.25	.029
9	April 15 - July 1 precipitation accumulation (cm)	-2.00	.051
14	Minimum air temperature since the previous sampling date (°C)	8.05	.000

Four variables promoted the vegetative phenologic development. They were: Soil moisture % at 15-30 cm depth on the sampling date (X_3), Soil moisture % at 15-30 cm depth on the previous sampling date (X_6), Winter precipitation (mm) (X_8), and minimum air temperature since the previous sampling date (X_{14}). Four factors prolonged the vegetative development. They were: Soil moisture percent at 0-15 cm depth on the sampling date (X_2), Soil moisture percent at 46-61 cm depth on the sampling date (X_4), Soil moisture percent at 46-61 cm depth on the previous sampling date (X_7), and Spring precipitation accumulation (X_9).

ANALYSES FOR AGROPYRON SPICATUM

Reproductive Phenology. Nine independent environmental variables were chosen from the selection pool of fourteen variables. The variables chosen and their significance levels are listed in Table IV. The regression model calculated for this subset of variables is:

$$Y_{15} = -25.28 + .907X_1 + .305X_2 + .555X_4 - .401X_6 + 2.286X_{10} - 2.560X_{11} + .154X_{12} + .538X_{13} + .138X_{14}$$

where Y_{15} = reproductive phenology.

This regression model was highly significant when tested by analysis of variance procedures ($P < .001$). The standard error of the regression equation was 3.161. The nine independent variables accounted for 74.51 percent of the variability of the reproductive phenology. This value represents an adjusted multiple correlation coefficient that has accounted for the number of variables present in the model.

Variables which promoted phenologic development were: Soil temperature at 38 cm depth on the sampling date (X_1), Soil moisture % at 0-15 cm depth on sampling date (X_2), Soil moisture % at 46-61 cm depth on sampling date (X_4), Summer precipitation accumulation (X_{10}), ambient air temperature on the sampling date (X_{12}), maximum air temperature since the previous sampling date (X_{13}), and mimimum air temperature since the previous sampling date (X_{14}). Variables which prolonged plant phenological development were: Soil moisture % at 15-30 cm depth on the previous sampling date (X_6) and Fall precipitation accumulation (X_{11}).

Vegetative Phenology. Ten independent environmental variables were selected from the possible variables to form the best regression model. The variables chosen and their significance levels are listed in Table V.

TABLE IV. Description and significances of independent variables used in the analysis of reproductive phenology of _Agropyron spicatum_.

X-Variable	Description	T-value	Significance
1	Soil temperature at 38 cm depth on the sampling date (°C)	+3.31	.002
2	Soil moisture % at 0-15 cm depth on the sampling date	2.11	.043
4	Soil moisture % at 46-61 cm depth on the sampling date	2.58	.015
6	Soil moisture % at 15-30 cm depth on previous sampling date	-1.25	.220
10	July 1-Oct. 15 precipitation accumulation	3.18	.003
11	Sept. 1-Oct. 15 precipitation accumulation (cm)	-2.83	.008
12	Ambient air temperature on sampling date (°C)	1.51	.142
13	Maximum air temperature since the previous sampling date (°C)	4.54	.000
14	Minimum air temperature since the previous sampling date (°C)	1.08	.289

The regression model calculated is listed below:

$$Y_{16} = .889 + .211X_1 + .120X_3 + .065X_4 - .143X_6 + .326X_8 + .418X_{10} - 1.09X_{11} - .039X_{12} + .093X_{13} + .039X_{14}$$

where Y_{16} = vegetative phenology.

The regression model was highly significant when tested by analysis of variance ($P \leq .001$). The standard error of the regression was .617. The independent variables present in the regression model accounted for 67.27 percent of the variability of the vegetative phenology.

Seven factors promoted plant vegetative phenologic development: Soil temperature at 38 cm depth (X_1), Soil moisture % at 15-30 cm depth on the

TABLE V. Descriptions and significances of independent variables used in the analysis of vegetative phenology of Agropyron spicatum.

X-Variable	Description	T-value	Significance
1	Soil temperature at 38 cm depth on the sampling date (°C)	3.83	.001
3	Soil moisture % at 15-30 cm depth on the sampling date	2.41	.022
4	Soil moisture % at 46-61 cm depth on the sampling date	1.38	.177
6	Soil moisture % at 15-30 cm depth on the previous sampling date	-2.27	.030
8	Oct. 15-Apr. 15 precipitation accumulation (cm)	2.53	.017
10	July 1-Sept. 1 precipitation accumulation (cm)	3.05	.005
11	Sept. 1-Oct. 15 precipitation accumulation (cm)	-4.50	.000
12	Ambient air temperature on sampling date (°C)	-1.91	.066
13	Maximum air temperature since the previous sampling date (°C)	4.14	.000
14	Minimum air temperature since the previous sampling date (°C)	1.55	.131

sampling date (X_3), Soil moisture % at 46-61 cm depth on sampling date (X_4), Winter precipitation accumulation (X_8), Summer precipitation accumulation (X_{10}), maximum air temperature since the previous sampling date (X_{13}) and minimum air temperature since the previous sampling date (X_{14}). Three factors prolonged phenological development: Soil moisture percent at 15-30 cm depth on the previous sampling date (X_6), Fall precipitation accumulation (X_{11}) and ambient air temperature on the sampling date (X_{12}).

ANALYSES FOR ARTEMISIA NOVA

Reproductive Phenology. Five environmental variables were chosen from the selection pool of variables. The variables chosen and their significance levels are listed in Table VI. The regression model calculated from this subset of variables is:

$$Y_{15} = -1.557 + .482X_1 + .588X_4 + .619X_5 - 3.655X_{10} + .110X_{14}$$

where Y_{15} = reproductive phenology.

The regression model was significant at P=.05 probability level. The standard error of the regression was 1.55. The independent variables present accounted for 70.92 percent of the variability of the reproductive phenology.

Four factors promoted phenologic development: Soil temperature at 38 cm depth on the sampling date (X_1), Soil moisture % at 46-61 cm depth on the sampling date (X_4), Soil moisture % at 0-15 cm depth on the previous sampling date (X_5), and minimum air temperature since the previous sampling date (X_{14}). One factor prolonged phenological development: July 1-Sept. 15 precipitation accumulation (X_{10}).

Vegetative Phenology. Two environmental variables were chosen from the selection pool of independent variables. The variables chosen and their significance levels are listed in Table VII. The regression model calculated from this subset is:

$$Y_{16} = .330 - .053X_{11} + .006X_{12}$$

where Y_{16} = vegetative phenology.

The F-statistic was calculated to be 4.26 (not significant). The standard error of the estimate was .04. The independent variables present in the model accounted for 39.44 percent of the variability of the vegetative phenology. The regression model for the vegetative phenology was found not to be statistically significant.

TABLE VI. Descriptions and significances of independent variables used in the analysis of reproductive phenology of *Artemisia nova*.

X-Variable	Description	T-value	Significance
1	Soil temperature at 38 cm depth on sampling date	2.86	.035
4	Soil moisture % at 46-61 cm depth on the sampling date	3.07	.028
5	Soil moisture % at 0-15 cm depth on the previous sampling date	2.83	.037
10	July 1-Sept. 1 precipitation accumulation (mm)	-2.46	.057
14	Minimum air temperature since the previous sampling date (°C)	1.02	.353

TABLE VII. Descriptions and significances of independent variables used in analysis of vegetative phenology of *Artemisia nova*.

X-Variable	Description	T-value	Significance
11	Sept. 1-Oct. 15 precipitation accumulation	-2.11	.068
12	Ambient air temperature on the sampling date (°C)	2.71	.027

One variable promoted vegetative phenological development: Ambient air temperature on sampling date (X_{12}). One factor prolonged phenological development: Fall precipitation accumulation (X_{11}).

ANALYSES FOR ARTEMISIA TRIDENTATA

Reproductive Phenology. Eight independent environmental variables were chosen from the selection pool of fourteen variables. The variables chosen and their significance levels are listed in Table VIII. The regression model calculated from the chosen variables is:

$$Y_{15} = -2.111 - .107X_2 + .205X_3 + .382X_4 - .324X_8 - .624X_9 + .810X_{11} + .173X_{13} + .197X_{14}$$

where Y_{15} = reproductive phenology.

The model was highly significant when tested by analysis of variance procedures ($P \leq .0001$). The standard error of the regression was 2.36. The independent variables accounted for 51.27 percent of the variability in big sagebrush reproductive phenology.

Five factors promoted reproductive phenologic development: Soil moisture % at 15-30 cm on the sampling date (X_3), Soil moisture % at the 46-61 cm depth (X_4), Fall precipitation accumulation (X_{11}), maximum air temperature on the previous sampling date (X_{13}), and minimum air temperature on the previous sampling date (X_{14}). Three factors prolonged phenological development: Soil moisture % at the 15-30 cm depth (X_2), Winter precipitation (X_8), and spring precipitation accumulation (X_9).

Vegetative Phenology. Eight independent environmental variables were chosen from the selection pool. The variables chosen and their significance levels are listed in Table IX. The regression model calculated from the chosen variables is:

$$Y_{16} = 2.352 + .024X_1 + .032X_4 + .017X_5 - .024X_7 + .092X_8 - .051X_9 + .022X_{13} + .036X_{14}$$

where Y_{16} = vegetative phenology.

The model was highly significant when tested by analysis of variance

TABLE VIII. Description and significances of independent variables used in the analysis of _Artemisia_ _tridentata_ reproductive phenology

X-Variable	Description	T-statistic	Significance
2	Soil moisture % at 0-15 cm depth on the sampling date (°C)	-1.33	.188
3	Soil moisture % at 15-30 cm depth on the sampling date	1.55	.127
4	Soil moisture % at 46-61 cm depth on the sampling date	2.84	.006
8	Oct. 15-April 15 precipitation accumulation	-1.17	.245
9	April 15-July 1 precipitation accumulation (cm)	-2.14	.036
11	Sept. 1-Oct. 15 precipitation accumulation	1.53	.131
13	Maximum air temperature on the previous sampling date (°C)	2.68	.009
14	Minimum air temperature on the previous sampling date	3.54	.001

TABLE IX. Descriptions and significances of independent variables used in the analysis of _Artemisia_ _tridentata_ vegetative phenology

X-Variable	Description	T-statistic	Significance
1	Soil temperature at 38 cm depth on the sampling date	1.71	.092
4	Soil moisture % at 46-61 cm depth on sampling date	2.60	.012
5	Soil moisture % at 0-15 cm depth on the previous sampling date	1.85	.069
7	Soil moisture % at 46-61 cm depth on the previous sampling date	-2.04	.045
8	Oct. 15-April 15 precipitation accumulation (cm)	4.14	.000
9	April 15-July 1 precipitation accumulation (cm)	-1.42	.159
13	Maximum air temperature since the previous sampling date (°C)	2.74	.008
14	Minimum air temperature since the previous sampling date (°C)	4.84	.000

procedures ($P \leq .001$). The standard error of the regression was .27. The independent variables accounted for 71.57 percent of the variability in big sagebrush vegetative phenology.

Six variables promoted vegetative phenologic development. They were: Soil temperature at 38 cm on sampling date (X_1), Soil moisture % at 46-61 cm depth on sampling date (X_4), Soil moisture % at 0-15 cm on previous samp.ing date (X_5), Winter precipitation accumulation (X_8), maximum air temperature on previous sampling date (X_{13}), minimum air temperature on previous sampling date (X_{14}). Two factors prolonged phenological development: Soil moisture % at 46-61 cm depth on the previous sampling date (X_7), and Spring precipitation accumulation (X_9).

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